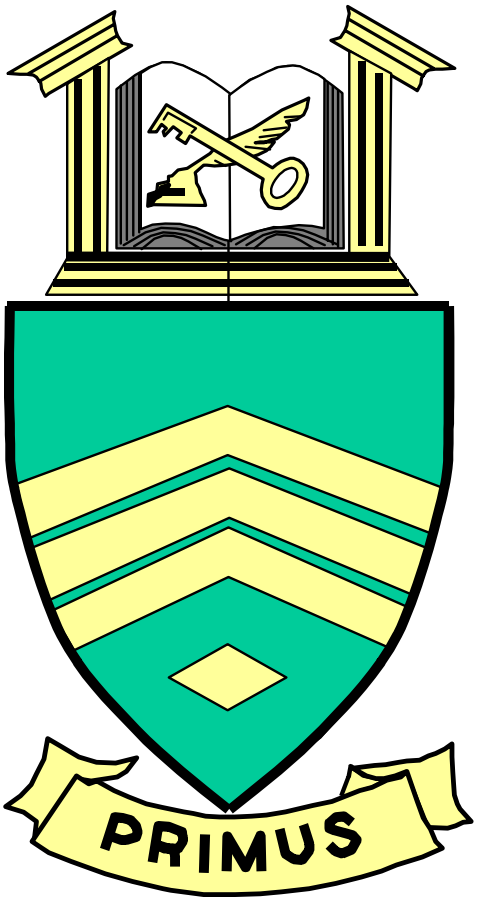
U.S. ARMY SERGEANTS MAJOR ACADEMY (FSC-TATS)

W655 (052002) AUG 01

ENVIRONMENTAL COMPLIANCE

PRERESIDENT TRAINING SUPPORT PACKAGE



Overview

An inherent responsibility of all leaders is the efficient and effective stewardship of resources in accordance with existing laws, regulations, and policies. The U.S. Army's commitment to a course of action that meets current responsibilities and enhances the environment for future generations is of paramount importance to the U.S. Army. As a leader, you must insure that your soldiers comply with host-nation, federal, state, and local environmental laws and regulations

Inventory of Lesson Materials

Prior to starting this lesson, ensure you received all materials (pages, tapes, disks, etc.) required for this Training Support Package. Go to the "**This [TSP or Appendix] Contains**" section, on page two of the TSP and the first page of each Appendix and verify you have all the pages. If you are missing any material, contact the First Sergeant Course Class Coordinator at the training institution where you will attend Phase II FSC-TATS.

Point of Contact

If you have any questions regarding this lesson, contact the First Sergeant Course Class Coordinator at the training institution where you will attend Phase II FSC-TATS.

PRERESIDENT TRAINING SUPPORT PACKAGE

TSP Number /Title	W655 Environmental Compliance.
Effective Date	Aug 01
Supersedes TSPs	W655, Environmental Compliance AUG 01
TSP User	This TSP contains a training requirement that you must complete prior to attending phase II, FSC-TATS. It will take you approximately 1 hour to complete this requirement. You will use the information in this lesson during Phase II, FSC-TATS to make use of your resources.
Proponent	The proponent for this TSP is the U.S. Army Sergeants Major Academy.
Comments and Recommendations	Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to : ATTN ATSS DCF FSC COMMANDANT USASMA BLDG 11291 BIGGS FIELD FT BLISS, TX 79908-8002
Foreign Disclosure Restrictions	The lesson developer in coordination with the USASMA foreign disclosure authority has reviewed this lesson. This lesson is releasable to foreign military students from all requesting foreign countries without restrictions.

This TSP Contains

The following table lists material contained in the TSP

Table of Contents		Page
Lesson	Section I, Administrative Data	2
	Section II, Introduction/Terminal Learning Objective	4
	Section III, Presentation	5
	Section IV, Summary	29
	Section V, Student Evaluation	29
	Section VI, Student Questionnaire	31
Appendixes	A. Lesson Evaluation and Solutions	Not used
	B. Lesson Exercise and Solutions	B-1
	C. Student Handouts	C-1

SECTION I ADMINISTRATIVE DATA

Task(s) Trained

This lesson trains the task listed in the following table:

Task number:	051-250-1003
Task title:	Enforce company compliance with host-nation, federal, state and local environmental laws and regulations,
Condition:	as a First Sergeant,
Standard:	IAW FM 3-100.4.
Task proponent	US Army Engineer School, Ft Leonard Wood, MO.

Tasks Reinforced

Task Number	Task Title
051-1250-1001	Comply with host nation, federal, state, and local environmental laws and regulations.
051-250-1002	Supervise platoon compliance with host nation federal, state, and local laws and regulations.
704-A-1000	Identify leader actions and tools that support the Army Management Control Process.

Prerequisite Lessons

None

Clearance and Access

There is no clearance or access requirement for this lesson.

Copyright Material

No copyrighted material reproduced for use in this lesson.

References

The following table lists references for this lesson.

Number	Title	Date	Para.	Additional Information
TC 3-34.489	The Soldier and the Environment	May 01		w/change 1 26 Oct 01
FM 3-100.4	Environmental Considerations in Military Operations	Jun 00		w/change 1 11 May 01

Equipment Required

None

Materials Required

Paper and pencil

Safety Requirements

None

Risk Assessment Level

Low

Environmental Considerations

None

Lesson Approval

The following individuals have reviewed and approved this lesson for publication and incorporation into the First Sergeant Course--Total Army Training System

Name/Signature	Rank	Title	Date
Kevin L. Graham	MSG	Lesson Developer	
Chris L. Adams	SGM	Chief Instructor, FSC	
John W. Mayo	SGM	Course Chief, FSC-TATS	

SECTION II INTRODUCTION

Terminal Learning Objective

At the completion of this lesson, you will--

Action:	Enforce company compliance with host nation, federal, state, and local environmental laws and regulations,
Conditions:	as a first sergeant,
Standard:	IAW FM 3-100.4.

Evaluation

Before entering phase II FSC-TATS, you will receive the end of Phase I Performance Examination that will include questions based on material in this lesson. On that examination, you must answer at least 70 percent of the questions correctly to achieve a GO.

Instructional Lead-in

The Army expects all leaders to serve as its environmental stewards. You have a professional and personal responsibility to understand and support the Army's environmental program. This lesson provides key environmental information as it leads you through a review of the Army's environmental model and the major laws and regulations concerning the environment. This information will assist you in completing any assigned mission while protecting the environment and conserving our natural resources.

SECTION III PRESENTATION

ELO 1

Action:	Identify leader responsibilities for environmental compliance,
Conditions:	as a first sergeant,
Standard:	Identified leader responsibilities for environmental compliance, IAW TC-3-34.489 and FM 3-100.4.

Learning Step/Activity 1, ELO 1

To complete this learning step activity, you are to-

Read the above ELO.

Study Student Handouts 1 and 2 (Appendix C)

Complete questions 1-7 of Lesson Exercise 1, in Appendix B (Page LE-1) without referring to the student handouts.

Compare your responses with the suggested solutions found on page SLE-1 in Appendix B.

ELO 2

Action:	Identify the requirements for an effective unit level environmental program,
Conditions:	as a first sergeant,
Standard:	Identified the requirements for an effective unit level environmental program, IAW FM 3-100.4.

Learning Step/Activity 1, ELO 2

To complete this learning step activity, you are to-

Read the above ELO.

Study Student Handouts 1 and 2 (Appendix C)

Complete questions 8-13 of Lesson Exercise 1, in Appendix B (Page LE-2) without referring to the student handouts.

Compare your responses with the suggested solutions found on page SLE-1 and 2 in Appendix B.

Action:	Identify risk management requirements during unit training,
Conditions:	as a first sergeant,
Standard:	Identified risk management requirements during unit training, IAW FM 3-100.4.

Learning Step/Activity 1, ELO 3

To complete this learning step activity, you are to-

Read the above ELO.

Read Student Handout 3 (Appendix C)

Understand the five-step process of risk management.

- Step 1. Identify Hazards
- Step 2. Assess hazards
- Step 3. Develop controls and make a decision
- Step 4. Implement controls
- Step 5. Supervise and evaluate

Be prepared to complete a risk-management work sheet for tasks assigned during phase II of the First Sergeants Course.

You will receive a comprehensive explanation of the risk management process in Lesson W656.

The Risk-Management Work Sheet is taken from Appendix F, FM 3-100.4

This risk-management work sheet is a tool that leaders may use to track and document the risk associated with any type of operation or activity.

The work sheet (Student Handout 3, Appendix C) provides a logical starting point to track the process. Planners use the work sheet to document the risk-management steps taken during planning, preparation, and execution of training and combat missions and tasks. It is important to remember that this form can be used to track all risk, not just environmental-related risk. Appendix G, FM 3-100.4, provides an explanation of the form in the form of a practical application, explaining how to document and track risk during an operation.

You will find this discussion in Student Handout 3, Appendix C.

SECTION IV SUMMARY

Review/ Summarize Lesson

During this lesson we have looked at some of the responsibilities of unit commanders and first sergeants. As a first sergeant, you are responsible for enforcing environmental laws and regulations and developing a sense of environmental awareness in your soldiers. Each of us has a legal and moral responsibility to protect the environment and to be good stewards.

SECTION V STUDENT EVALUATION

Testing Requirements

Before entering Phase II, you will receive the end of Phase I Performance Examination that will include questions based on material in this lesson. On that examination, you must answer at least 70 percent of the questions correctly to achieve a GO.

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SECTION VI, QUESTIONNAIRE

Directions

- Complete the following actions:
- Enter your name, rank and the date you complete this questionnaire.

Name: Rank: Date:

- Answer items 1 through 6 below. Use additional pages if necessary.
- Fold the questionnaire so the address for USASMA is visible.
- Print your return address, add postage, and mail.

Note: Your response to this questionnaire will assist the Academy in refining and improving this course. When completing the questionnaire, answer each question frankly. Your assistance helps build and maintain the best Academy curriculum possible.

Item 1	Do you feel you have met the learning objectives of this lesson?
Item 2	Was the material covered in this lesson new to you?
Item 3	Which parts of this lesson were most helpful to you in meeting the learning objectives?
Item 4	How could we improve the format of this lesson?
Item 5	How could we improve the content of this lesson?
Item 6	Do you have additional questions or comments? If you do, please list them here. You may add additional pages if necessary.

ATTN ATSS DCF
COMDT, USASMA
11291 BIGGS FLD
FORT BLISS, TEXAS 79918-8002.

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APPENDIX B

Index of Lesson Exercises and Solutions

This Appendix Contains

This Appendix contains the items listed in this table---

Title/Synopsis	Pages
LE-1, Lesson Exercise	LE-1-1 thru LE-1-2
SLE-1, Solution/Discussion, Lesson Exercise	SLE-1-1 thru SLE-1-2

Lesson Exercise 1

ELO 1, Identify the leader responsibilities for environmental compliance.

1. The key building blocks of the Army Environmental Model are?
a. _____.
b. _____.
c. _____.
d. _____.
e. _____
f. _____

2. The four pillars of the Army's environmental model are?
a. _____.
b. _____.
c. _____.
d. _____.

3. Which of the following laws sets the nation's framework for managing hazardous waste?
a. National Environmental Policy Act (NEPA)
b. Clean Water Act (CWA)
c. Resource Conservation and Recovery Act (RCRA)
d. Environmental Protection Act (EPA)

4. The purpose of the National Historic Preservation Act (NHPA) is?
_____
_____.

5. What act authorizes the imposition of fines on military personnel failing to comply with the Resource Conservation and Recovery Act?
_____.

6. One of the responsibilities of subordinate leaders in environmental stewardship is?
a. Identify environmental risks associated with individual, collective, and mission essential task list (METL) task performance.
b. Be knowledgeable about the NEPA, HM, HW, HAZCOM efforts, and spill contingencies.
c. Address environmental concerns throughout the training cycle
d. Establish and sustain unit environmental awareness training

7. A responsibility of the unit commander is to?
a. Identify and assess the environmental consequences of proposed programs and activities.
b. Support the Amy's recycling program
c. Counsel soldiers on the importance of protecting the environment and the possible consequences of not complying with environmental laws and regulations.
d. Train peers and subordinates to identify the environmental effects of plans, actions, and missions.

ELO 2, Identify the requirements for an effective unit level environmental program.

8. An action that supports an effective unit environmental program is?
_____.

9. What is the Army's objective relating to hazardous material?
_____
_____
_____.

10. If your unit deals with hazardous waste, one of the things you should do is?
_____
_____.

11. An effective hazardous communication program will assist leaders in determining?
_____
_____.

12. In order to comply with the Clean Water Act, one of the things you must do is?
_____.

13. You can determine environmental compliance through a _____
_____,or _____
_____.

Solution/Discussion Lesson Exercise 1

ELO 1, Identify the leader responsibilities for environmental compliance.

1. The key building blocks of the Army Environmental Model are?
a. People
b. Resources
c. Communication
d. Management and Organization
e. Shared Values
f. Leadership
TC 3-34.489, Figure 1-1, SH-1-2

2. The four pillars of the Army Environmental Model are?
a. Compliance
b. Restoration
c. Prevention
d. Conservation
TC 3-34.489, Figure 1-1, SH-1-2

3. Which of the following laws set the nation's framework for managing hazardous waste?
Answer: C
TC 3-34.489, Appendix B, Para B-7, SH-1-5

4. The purpose of the National Historic Preservation Act (NHPA) is?
Answer: to help safeguard against the loss of irreplaceable historical, archeological, and cultural properties.
TC 3-34.489, Appendix B, Para B-11, SH-1-6

5. What act authorized the imposition of fines on military personnel failing to comply with the Resource Conservation and Recovery Act
Answer: The Federal Facilities Compliance Act.
TC 3-34.489, Appendix B, Para B-13, SH-1-6

6. One of the responsibilities of subordinate leaders in environmental stewardship is?
Answer: Identify environmental risks associated with individual, collective, and mission essential task list (METL) task performance.
FM 3-100.4, Para 1-72, SH-2-2

7. A responsibility of the unit commander is to?
Answer: Identify and assess the environmental consequences of proposed programs and activities.
FM 3-100.4 Para 1-42, SH2-1

ELO 2, Identify the requirements for an effective unit level environmental program.

8. An action that supports an effective unit environmental program is?
Answer: Designate an environmental compliance/HW coordinator
FM 3-100.4 Para 6-12, SH-2-5

9. What is the Army's objective relating to hazardous material?
Answer: To minimize health hazards and environmental damage caused by the use and misuse of hazardous material
FM 3-100.4, Para 6-14, SH-2-6

10. If your unit deals with hazardous waste, one of the things you should do is?
Answer: Ensure that HW is properly identified. The correct danger warning signs must be present on stored waste, and the containers that hold HW must be properly labeled.
FM 3-100.4, Para 6-16, SH-2-6

11. An effective hazardous communication program will assist leaders in determining?
Answer: What hazardous chemicals are present in their units, how to protect their soldiers from hazards those chemicals present, and how to properly store and use those chemicals.
FM 3-100.4, Para 6-17, SH-2-7

12. In order to comply with the Clean Water Act, one of the things you must do is?
Answer: Maintain a copy of the Installation Spill Contingency Plan.
FM 3-100.4, Para 6-25, SH-2-9

13. You can determine environmental compliance through a formal inspection by a regulatory agency, or it can also be determined through self-inspections using Environmental Compliance Assessment System (ECAS) checklists as a guide.
FM 3-100.4, Para 6-26, SH-2-9

APPENDIX C

INDEX OF STUDENT HANDOUTS

This Appendix Contains

This Appendix contains the items listed in this table---

Title/Synopsis	Pages
SH-1, Material extracted from TC 3-34.489	SH-1-1 thru SH-1-7
SH-2, Material extracted from FM 3-100.4, Environmental Planning Guidelines	SH-2-1 thru SH-2-33
SH-3, Material extracted from FM 3-100.4, Appendix G, Practical Application of Accessing Environmental Related Risk	SH-3-1 thru SH-3-9
SH-4, Points of Contact	SH-4-1

STUDENT HANDOUT 1

EXTRACT FROM TC 3-34.489

Chapter 1
The Army, the Soldier, and the Environment

The military must confront its environmental responsibilities. Currently, the Department of Defense (DOD) must clean up more than 20,000 sites suspected of being contaminated with toxic materials. The Army is responsible for many of the sites that are littered with hazards such as paints, solvents, ammunition, and fuel. Preventing this damage would have been far less costly than cleaning up these sites.

ENVIRONMENTAL VISION

1-1. Caring for the environment begins with the Army's vision of environmental responsibility. The following vision statement describes what the Army expects of soldiers:

Vision Statement: *"The Army will integrate environmental values into its mission in order to sustain readiness, improve the soldier's quality of life, strengthen community relationships, and provide sound stewardship of resources."*

1-2. Taking care of the environment protects health, safety, and natural resources. For example, when fuel spills on the ground, it soaks into the soil, poisons plants, and eventually enters streams and lakes that supply drinking water. (See *FM 3-100.4* for more information.)

1-3. Caring for the environment also supports the Army mission. Costly environmental cleanups detract from Army readiness. During war, many wise tactical, medical, or operations-security (OPSEC) practices are also good environmental practices. Handling fuels safely, maintaining vehicles, disposing of solid waste/hazardous waste (HW), and managing and turning in ammunition properly are sound environmental and tactical considerations that carry over from training into combat operations.

1-4. Many practices that damage the environment waste time and do not lead to success in combat. One example occurred during the Gulf War when Iraqi soldiers set fire to Kuwaiti oil fields and poured millions of gallons of crude oil into the Persian Gulf. The Iraqi Army deliberately damaged environmental resources and wasted valuable time and effort on activities that did not stop the al l ies' advance. Remember, environmental stewardship does not prevent the Army from fighting and winning wars—it supports the Army mission.

ENVIRONMENTAL ETHIC

1-5. *FM 22-100* defines ethics as principles or standards that guide soldiers and professionals to do the moral or right thing. The environmental ethic is as follows:

Environmental Ethic: *"We will take care of the environment because it is the right thing to do."*

1-6. Soldiers put this ethic into practice by—

- Complying with installation environmental policies, unit standing operating procedures (SOPs), Army regulations (ARs) , and environmental laws and guidelines (see *Appendix B*).
- Preventing environmental damage and pollution by making sound decisions that will not harm the environment.
- Advising the chain of command when unit actions do not comply with environmental guidelines.

- Supporting the Army recycling program.
- Reporting hazardous-material (HM) and HW spills immediately.
- Making sound environmental decisions in the absence of a supervisor or proper guidance.

STRATEGY

1-7. Based on the vision and the ethic (*FM 3-100.4*), the Army seeks to conduct operations that are environmentally sustainable, enhance the quality of life, and improve national security. The Army's strategy is to—

- Comply with all environmental laws and regulations.
- Prevent pollution at the source by reducing, reusing, or recycling materials that cause pollution.
- Conserve and preserve natural and cultural resources so that they will be available for present and future generations.
- Restore contaminated sites as quickly as possible.

1-8. The environmental model (see *Figure 1-1, page 1-4*) shows how these four pillars support environmental stewardship. The Army mission, at the top, requires the Army to manage and use natural resources wisely. Just as a building's walls support its roof, the model's four pillars support environmental stewardship. Environmental stewardship, in turn, supports the Army mission.

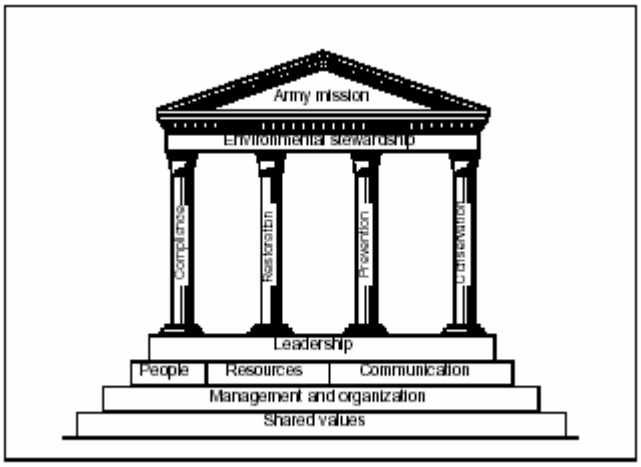

Figure 1-1. Environmental Model

COMPLIANCE

1-9. Compliance with environmental regulations is now a necessary cost of doing business. The Army expects soldiers to obey local, state, federal, and host-nation (HN) environmental requirements. By following the unit environmental SOP, the environmental guidance that leaders publish in operation orders (OPORDs), and installation environmental regulations, soldiers can help the Army meet its compliance goal.

RESTORATION

1-10. Most soldiers do not have any restoration responsibilities. However, to make the installation a safer place for soldiers and their families, the Army is cleaning up its contaminated sites. By following the principles under the other three environmental pillars,

PREVENTION

1-11. Prevention is the Army's attempt to reduce or eliminate pollution. Preventing pollution is always more effective and less costly than cleaning up polluted sites. Soldiers can support prevention efforts by reducing, reusing, or recycling waste products.

Reduce

1-12. If soldiers perform a job carefully, they can often reduce the amount of pollution produced. For example—

- Storing cans of paint properly prevents the paint from ruining and prevents pollution.
- Using floor-sweep compound carefully reduces the amount of floor sweep required to clean up oil spills.
- Using products with less packaging prevents pollution.
- Using less harmful products reduces the toxicity of the waste generated.
- Using soap and water instead of harmful solvents reduces the amount of harmful materials produced and prevents pollution.

Reuse

1-13. Reusing products reduces the amount of trash and waste that must be taken to commercial landfills. Instead of throwing things away, reuse them. For example—

- Use both sides of notepaper before throwing it away.
- Select products that have refillable containers.
- Collect and reuse rags in the arms room or the motor pool.

Recycle

1-14. Prevent pollution by recycling. Many products the Army uses can be recycled. This includes paper, aluminum cans, radiators, batteries, pavement, and scrap metal. The installation can often sell recyclable materials and raise funds for things like recreation facilities.

CONSERVATION

1-15. Conservation is the Army's intent to preserve the natural and cultural resources under its care. Soldiers can support conservation by avoiding needless damage to the environment. During training exercises, practice trash and litter discipline. Afterwards, thoroughly police training areas and bivouac sites. Participating in activities such as the unit recycling and energy conservation programs conserves resources for the future.

CONCLUSION

1-16. The Army is integrating environmental considerations into its approach to war fighting. This ensures that as the Army fights and wins future conflicts, its approach will strive to protect and preserve valuable resources (soldiers and materials) and the natural environment.

Chapter 2

Protecting the Environment

Soldiers are the Army's first line of defense in protecting the environment. They must safeguard the environment where they work and live. By making good environmental decisions, soldiers can make a difference.

THE ENVIRONMENT

2-1. A soldier's actions have an effect on the environment each day. If something is poured onto the ground or into a storm drain, it pollutes the drinking water (*Figure 2-1, page 2-2*). Chemicals that soak into the soil contaminate plants and eventually enter lakes, ponds, and aquifers. Once these chemicals enter primary water sources, it is only a matter of time until they contaminate the drinking water. Actions taken to prevent contamination are inherently more effective and efficient than actions taken to remedy a situation.

SOLDIER ACTIONS

2-2. The Army wants soldiers to think about the environmental consequences of their actions before they act. Each time a soldier begins a task, he should ask, "How will this activity affect the environment?"

2-3. Answering this question begins the process of assessing the environmental risks associated with the job. Here are some common situations in which a soldier affects the environment by his actions:

- Vehicle maintenance.
- Weapons maintenance and cleaning.
- Nuclear, biological, and chemical (NBC) equipment maintenance and decontamination equipment.
- Supply, storage, and transportation.
- Vehicle refueling.
- Field sanitation.
- Maneuver-damage control.
- Field recovery.
- Weapons training and demolition.

Appendix B

Environmental Laws Affecting Soldier Actions

The environmental laws and regulations in this appendix are not all inclusive, but they represent those that are most applicable to soldiers. For further information about these and other laws, ask the chain of command or the installation staff judge advocate or environmental office.

BASIS OF ENVIRONMENTAL LAWS

B-1. The four types of environmental laws in *FM 3-100.4* that apply to soldiers are federal, state, local, and HN (*Figure B-1, page B-2*).

B-2. Federal laws are enacted by Congress and enforced by federal agencies like the Environmental Protection Agency (EPA), the Department of Transportation (DOT), and the Army. Once an agency determines how to enforce the laws, it develops regulations. In this way, Army environmental regulations are based on federal laws. States and cities may also enact environmental laws of their own. These state and local environmental laws are often tougher than federal laws. However, Army installations located in these states or near these cities must obey state and local environmental laws as well as federal environmental laws. If an Army installation is located overseas, soldiers must also follow HN environmental laws.

B-3. Soldiers are responsible for knowing what environmental requirements apply to their duties. The following regulations contain Army environmental laws:

- AR 200-1 describes the Army environmental program and assigns responsibilities for managing the program.
- AR 200-2 describes how the Army considers environmental issues during planning and decision making.
- AR 200-3 describes how the Army manages the natural resources under its control, including threatened and endangered species.
- AR 200-4 describes the Army cultural-resources management program, including historical and pre historical sites, buildings, and structures and Native-American sites.
- AR 200-5 describes Army policies, standards, and procedures for pest-control activities. It also incorporates DOD measures of merit for pest management as articulated in Department of Defense Instruction (DODI) 4150.7.

B-4. Each installation has an environmental regulation that combines all the environmental laws and regulations into a single set of environmental guidelines. Installation environmental regulations tell how to comply with local, state, federal, and HN environmental laws. Units' base their environmental SOPs and environmental training on the guidelines specified in installation environmental regulations.

FEDERAL ENVIRONMENTAL LAWS

B-5. Soldiers should understand the following federal environmental laws. They affect many of the activities that soldiers perform each day.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

B-6. The NEPA (*FM 3-100.4, Appendix A*) requires the Army to determine the environmental impact of proposed actions. If a proposed action will harm the environment, the Army must develop a plan to eliminate or minimize the damage. Soldiers comply with the NEPA by—

- Considering the environmental consequences of their actions.
- Following environmental guidelines set forth in unit SOPs, installation regulations, and mission orders.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

B-7. The RCRA (*FM 3-100.4, Appendix A*) governs how the Army identifies, transports, stores, and disposes of HM and HW. RCRA places "cradle-to-grave" responsibility for HW on the personnel or units generating the waste. It also governs recycling and reusing nonhazardous material and waste. Used munitions can become a regulated HW in some cases.

B-8. Soldiers comply with RCRA by—

- Supporting the installation recycling program.
- Removing materials (expended brass, communications wire, concertina, booby traps, UXO, and propellant charges) from training sites.
- Conducting police calls to collect and dispose of solid waste.
- Collecting and turning in HW and HM according to unit SOPs.
- Knowing what HM they use on the job or at home.
- Knowing what HW they produce as they perform their jobs.

CLEAN WATER ACT (CWA)

B-9. The CWA (*FM 3-100.4, Appendix A*) applies to facilities that place pollutants into bodies of water. The CWA affects groundwater, storm water, surface water (lakes, rivers, and streams), marshes, swamps, wetlands, coastlines, and navigable waterways (canals). Soldiers comply with the CWA by—

- Disposing of chemicals, solvents, and HW properly. Never dispose of them in storm drains, sinks, toilets, or drains.
- Washing vehicles in approved wash racks only.
- Cleaning up spills in the work area immediately.
- Reporting spills through the chain of command.

CLEAN AIR ACT (CAA)

B-10. The CAA (*FM 3-100.4, Appendix A*) requires the Army to prevent, control, and/or reduce air pollution from nontactical vehicles, facilities, and operations. Soldiers comply with the CAA by—

- Checking with the local environmental office before using gas or smoke.
- Meeting state inspection standards for privately owned vehicles (POVs).
- Observing local fire and burning restrictions.
- Following local dust-control guidelines on tank trails and range roads.
- Keeping solvent vats closed when not in use.
- Using paints and thinners correctly with proper equipment (paint application techniques and paint booths).

- Maintaining and operating equipment (engines, boilers, and generators) properly to reduce airpollution problems.
- Ensuring that air-conditioning systems in POVs and government vehicles are only serviced by individuals who are properly trained and certified.

NATIONAL HISTORIC PRESERVATION ACT (NHPA)

B-11. The NHPA (*FM 3-100.4, Appendix A*) safeguards against the loss of irreplaceable historical, archeological, and cultural properties. The NHPA requires Army installations to identify and safeguard possible archeological and historical sites, artifacts, and structures. It also requires the Army to protect and preserve the historical sites located on its installations. Soldiers comply with the NHPA by—

- Leaving historical and pre historical artifacts and sites undisturbed.
- Reporting the discovery of artifacts and sites to the chain of command.
- Reporting vandalism, theft, and damage to historical, cultural, and archeological sites.
- Planning and conducting training, operations, and logistics activities to avoid damaging historical and archeological sites.

ENDANGERED SPECIES ACT (ESA)

B-12. The ESA (*FM 3-100.4, Appendix A*) protects threatened and endangered plants and animals. Army installations often include natural areas that are the last remaining refuge for endangered plants and animals. Almost every military training area has some endangered species. Soldiers comply with the ESA by—

- Recognizing signs and markers that indicate protected habitat areas.
- Avoiding marked-off habitat areas during training and operations.
- Following installation regulations for hunting, fishing, and camping.
- Obeying range-control guidelines for cutting brush and trees for camouflage.

FEDERAL FACILITIES COMPLIANCE ACT (FFCA)

B-13. The FFCA (*FM 3-100.4, Appendix A*) allows the EPA and the states to inspect and fine Army installations that violate environmental laws identified in the RCRA. The FFCA also allows federal, state, and local environmental agencies to prosecute soldiers who knowingly violate environmental laws during the performance of their duties. Soldiers comply with the FFCA by—

- Cooperating with environmental inspectors.
- Performing self-assessments of their work area to ensure that they are complying with environmental guidelines.
- Informing their chain of command when they discover environmental problems.

NOISE CONTROL ACT (NCA)

B-14. The NCA (*FM 3-100.4, Appendix A*) promotes an environment that is free from noise that jeopardizes health or welfare. The Army should comply with all federal, state, and local requirements, respecting the control of noise unless doing so conflicts with the military mission. Soldiers comply with the NCA by— • Avoiding unnecessary noise.

- Respecting noise-buffer zones, minimum flight altitudes, no-fly zones, and nighttime curfews designated by the installation.

LOCAL, STATE, AND HOST-NATION ENVIRONMENTAL LAWS

B-15. Some state and local governments have additional environmental laws (*FM 3-100.4, Appendix A*). Actions allowed by the environmental laws of one state may be illegal in another state. The installation environmental coordinator knows the state laws that apply to the installation.

B-16. Many of the countries where soldiers might deploy also have different environmental requirements. Army units in foreign countries must follow the environmental guidelines of the HN. When units deploy to other states or countries, leaders should inform them of changes in environmental requirements.

ENVIRONMENTAL PENALTIES

B-17. Federal and state environmental regulatory agencies can impose penalties on the Army for violating environmental laws. These penalties (*FM 3-100.4, Appendix A*) include fines, increased monitoring and intervention by environmental regulators, and damage awards from lawsuits.

B-18. A soldiers who violates environmental laws or allows others to do so can be prosecuted by military authorities under the Uniform Code of Military Justice (UCMJ) or in Federal District Court. If convicted of environmental violations, he can receive fines up to $50,000 per day of violation and imprisonment up to two years.

CONCLUSION

B-19. Army environmental regulations are based on federal laws. State and local environmental laws apply to the area where soldiers live and work. If living in a foreign country, HN laws also apply. The Army will obey all environmental laws that apply to its installations, and the Army expects soldiers to do the same.

STUDENT HANDOUT 2

EXTRACT FROM FM 3-100.4

Chapter 1

Environmental Protection and Military Operations

ENVIRONMENTAL RESPONSIBILITIES

ENVIRONMENTAL STEWARDSHIP GOALS

1-27. Environmental protection is no longer the province of a few technical experts. It requires soldiers and Marines to prevent environmental problems by caring for those resources entrusted to them by the American people. This responsibility includes financial, material, and environmental stewardship. Environmental stewardship, the wise use and management of environmental resources, is a natural outgrowth of the military's role as protector of US national security. The following are goals for responsible environmental stewardship:

- Demonstrating leadership in environmental protection and improvement, including pollution prevention.
- Ensuring that consideration of the natural and cultural environment is an integral part of decision-making.
- Minimizing adverse natural environment and human health impacts while maximizing readiness and strategic preparedness.
- Initiating aggressive action to comply with all applicable federal, state, local, and HN environmental laws.
- Supporting pollution prevention programs, which includes periodically reassessing products and processes that generate pollution, reusing and recycling materials, and avoiding hazardous waste (HW) generation.
- Managing all military controlled lands, natural and cultural resources, and remediate areas contaminated by past activities.
- Enhancing outreach activities with local communities by openly addressing environmental quality issues.

1-35. Commanders, staffs, subordinate leaders, and soldiers/Marines must understand their individual duties and responsibilities for environmental protection and become environmental stewards. To practice stewardship, US military personnel must understand the basic environmental management responsibilities that apply to their work area or assigned duties.

1-42. Army Regulation (AR) 200-1, Marine Corps Order (MCO) P5090.2A, the Army's *Commander's Guide to Environmental Management*, and the Marine Corp's *Commander's Guide to Environmental Compliance and Protection* specify commanders' environmental responsibilities. To carry out these responsibilities, commanders do the following:

- Comply with an installation's environmental policies and legally applicable and appropriate federal, state, and local laws and regulations or country-specific final governing standards (FGS) if outside the continental United States (OCONUS).
- Demonstrate a positive and proactive commitment to environmental stewardship and protection.
- Provide environmental training required by law, regulation, or command policy.
- Ensure that all personnel can perform their duties in compliance with environmental laws and regulations, and can respond properly to emergencies.
- Promote proactive environmental measures and pollution prevention.
- Supervise compliance with environmental laws and regulations during operational, training, and administrative activities.
- Include environmental considerations in mission planning, briefings, meetings, execution, and after-action reviews (AARs). (See Appendix E.)
- Understand the requirements of Army/Marine Corps environmental programs. (See Chapter 5.)
- Identify and assess the environmental risks of proposed programs and activities. (See Chapter 2 and Appendixes F and G.)
- Coordinate unit activities with higher headquarters' (HQs) environmental elements.

- Appoint and train an environmental compliance officer (ECO) and an HW coordinator for the unit.
- Ensure that SOPs contain all environmental considerations and regulatory requirements appropriate for the level of command. (See Appendix C.)
- Conduct environmental self-assessment or internal environmental compliance assessments. (See Chapter 5 and Appendix H.)
- Understand the linkages between environmental considerations and their associated impact on safety, force protection, and force health protection. (See Chapter 7.)

Subordinate Leaders

1-72. The role of leaders in environmental stewardship centers on building an environmental ethic in their soldiers and Marines by training and counseling subordinates on environmental stewardship, leading by example, and enforcing compliance with laws and regulations. Leaders do the following:

- Communicate the Army/USMC environmental ethic to soldiers and Marines while training them to be good environmental stewards.
- Develop and sustain a positive and proactive commitment to environmental protection.
- Identify environmental risks associated with individual, collective, and mission essential task list (METL) task performance. (See Chapter 2.)
- Plan and conduct environmentally sustainable actions and training.
- Protect the environment during training and other activities.
- Analyze the influence of environmental factors on mission accomplishment.
- Integrate environmental considerations into unit activities.
- Train peers and subordinates to identify the environmental effects of plans, actions, and missions.
- Counsel soldiers and Marines on the importance of protecting the environment and the possible consequences of not complying with environmental laws and regulations.
- Ensure that soldiers and Marines are familiar with the unit SOPs, and supervise their compliance with laws and regulations.
- Incorporate environmental considerations into AARs.
- Understand the linkages between environmental considerations and their associated impact on safety, force protection, and force health protection.

(See Chapter 7.)

Chapter 2

Planning: Integrating Environmental Considerations

2-79. Unit leaders use risk assessment to estimate the impact of their unit activities on the natural environment and to identify environmentally-related safety issues for their soldiers or Marines. Environmental-related risk is part of the risk management process as detailed in FM 100-14. Knowledge of environmental factors is key to planning and decision-making. Risk management does not convey authority to deliberately disobey local, state, national, HN laws and regulations, or the environmental laws of war (ELOW). Risk management assists commanders in complying with environmental regulatory and legal requirements, and operating within the higher commanders' intent. Unit leaders should complete risk assessments before conducting training, operations, or logistical activities. Risk assessments assist leaders and their staffs in identifying potential environmental hazards, develop controls, make risk decisions, implement those controls, and ensure proper supervision and evaluation. Unit staffs consolidate environmental risks, as well as all other risk, into the overall unit risk management plan for an operation.

Chapter 3

Training: Integrating Environmental Considerations

Preexecution Checks

3-10. Preexecution checks are developed, and responsibility for them is fixed during the short-range planning phase. These checks become increasingly detailed during the near-term phase. Preexecution checks provide the attention to detail needed to use resources efficiently. The three major environmental considerations are:

- Has a risk assessment (environmental) been completed and safety considerations incorporated?
- Has reconnaissance of the training ranges, sites, or facilities been conducted?
- Have leaders been briefed on environmental considerations?

PREPARATION FOR THE EXECUTION OF TRAINING

3-11. Formal planning for training culminates with the publication of the training schedule. Informal planning and coordination (preexecution checks) continue until the training is performed. During rehearsals, leaders ensure all safety and environmental considerations are met.

3-12. To conduct effective, meaningful training for soldiers, leaders, and units, thorough preparation is essential. Well prepared trainers, soldiers, and support personnel are ready to participate, and their facilities, equipment, and materials are ready to use.

EXECUTION

3-13. A unit executes training the same way it executes a combat mission. The chain of command is present, in charge, and responsible. During operations, leaders ensure environmental practices and preventive measures are being employed. Once soldiers/Marines understand what is expected of them, these practices become merely another measure of unit proficiency and the level of unit discipline.

Precombat Checks

3-14. Preexecution and precombat checks are key to ensuring that trainers and soldiers/Marines are adequately prepared to execute training to Army/Marine Corps standards. Precombat checks are the bridge between preexecution checks and execution of training. Leaders ensure the execute of precombat checks by:

- Briefing environmental considerations in the OPORD. Leaders and soldiers/Marines know what is expected of them.
- Including environmental considerations in the safety checks and briefings.
- Verifying completion of precombat (before operations) PMCS completed on vehicles, weapons, communications, and nuclear, biological, and chemical (NBC) equipment to include environmental considerations.
- Checking and confirming vehicle load plans, and securing cargo (especially HM).

Presentation of Training

3-15. Through the presentation of training, leaders provide soldiers/Marines with the specific training objectives (tasks, conditions, standards), and the evaluation methods to be used. Environmental constraints may alter the conditions under which the task is performed, but should never alter the task standards. Leaders ensure an environmental focus during this phase by:

- Conducting environmental awareness training.
- Supervising high risk operations.
- Conducting periodic environmental assessments.
- Correcting problems on the spot.
- Avoiding off-limits areas.
- Preventing spills.
- Reporting damage accurately and in a timely manner.
- Removing HM/HW in a timely and appropriate manner.

EVALUATION

3-16. The evaluation process is continuous and integral to training management. Leaders at every level conduct training evaluation. Discussing both the environmentally correct and incorrect actions enhances environmental stewardship in unit personnel and helps soldiers/Marines learn from each other. The AAR process includes environmental performance and should address all environmental considerations listed in the training evaluation

plan as well as any others discovered during the course of the training. The evaluation and AAR should cover the following:

- Ensuring environmental accountability.
- Ensuring HM/HW accountability.
- Including environmental issues in AARs.
- Developing environmental lessons learned.

UNIT ASSESSMENT

3-17. Leaders use evaluations and other feedback measures to assess soldier/Marine, leader, and unit proficiency. Commanders use the analysis of the information provided through evaluations for their assessment. Based on evaluations, commanders adjust priorities and resources as necessary to synchronize all unit functions. Leaders can also use portions of the selfassessment guide in Appendix H to assist in their unit assessment.

Chapter 6

Establishing and Assessing a Unit Program

"The unit does well what the commander checks."
General Bruce C. Clarke

Chapter 5 introduced the installation/garrison/base organizations, responsibilities and support to units stationed at, or performing training on an installation/base. Chapter 6 illustrates how that structure supports leaders in establishing and assessing a unit program. Unit-level environmental programs require guidance and support from the chain of command. Army major Army commands (MACOMs) and Marine Corps higher HQs conduct environmental assistance visits to ensure that installations comply with appropriate environmental laws. Unit leaders coordinate with the installation's environmental office and their higher HQ for assistance visits and compliance audits within the unit area. Additionally, unit leaders or their designated representatives, conduct self-assessments to determine how well their unit is following environmental protection measures at the unit level. Unit leaders incorporate certain environmental protection measures into the unit's SOP to ensure their soldiers and Marines use appropriate environmental protection measures.

ENVIRONMENTAL COMPLIANCE

6-1. The Army and Marine Corps determine environmental compliance status in two ways. Federal, state, and local regulatory agencies conduct formal compliance audits and spot checks on installations and report their findings to the military chain of command. Additionally, each service provides installation inspections under the Army's ECAS or Marine Corp's ECE. Installations conduct internal evaluations, while Army MACOMs or Marine Corps higher HQs conduct external evaluations. Federal, state, or local inspections may result in civil and criminal penalties for noncompliance with environmental laws and regulations. Self-assessment can be conducted using the installation status report software (Part II – Environmental). When afloat or under Naval authority, commanders should become familiar with Naval Warfare Publication (NWP) 4-11 for further guidance to incorporate environmental considerations into naval force operations.

FEDERAL AND STATE REGULATORY INSPECTIONS

6-2. Regulatory agencies, such as the Environmental Protection Agency (EPA), have the legal right and responsibility to inspect units and facilities to ensure compliance with environmental laws and regulations. These agencies usually coordinate inspections through the installation's environmental office. The agencies may, however, conduct inspections without notice.

6-3. The EPA and Federal Facilities Compliance Act (FFCA) set inspection frequency guidelines. For example, inspections for HW facilities under the RCRA generally occur annually.

6-4. Inspections in other programs may occur at different frequencies. Installations and units with specific major problems can expect frequent follow-up inspections that may include checks of training records and documentation, permit reviews, and storage facilities.

ENVIRONMENTAL COMPLIANCE ASSESSMENT SYSTEM/ENVIRONMENTAL COMPLIANCE EVALUATION

6-5. In the US, regulatory agencies (i.e., state agencies, the EPA, or the US Fish and Wildlife Service [USFWS]) conclusively determine installation compliance with environmental laws and regulations. However, many environmental regulations require self-regulation in which case the installation monitors its own programs and notifies the regulatory agency when problems occur.

6-6. Military services conduct internal compliance assessments for their installations. Units participate in these assessments, which review all aspects of the installation's environmental status to include the following:

- Training.
- Planning and programming.
- Resourcing.
- Correcting past deficiencies.
- Preventing pollution.
- Managing natural and cultural resources.
- Complying with emissions standards.
- Maintaining records and reports.

6-7. The Army established the ECAS, and the Marines established the ECE, as a means of achieving, maintaining, and monitoring compliance with applicable environmental laws. In addition, the Army and Marine Corps use compliance assessments as a vehicle to attain environmental program goals.

6-8. Service regulations require units with HW and HM to conduct internal inspections. HW coordinators for larger units can request a copy of the ECAS/ECE protocol to assist in developing inspections and record-keeping plans. The installation's HW management plan should contain sufficient information to develop an inspection plan for a unit's HW generation points and accumulation sites. Units should contact the environmental office for ECAS/ECE protocol or for ECAS/ECE checklists to conduct an internal selfassessment.

6-9. OCONUS MACOM commanders determine the scope of compliance assessment within their commands based on the SOFA and FGS requirements for the country in which they are located. In the absence of an FGS, OCONUS MACOM commanders use the OEBGD. These requirements govern the activities of the supporting installation, and installation requirements direct unit assessment activities.

6-10. Unit leaders set the tone for environmental compliance within their units. They bring focus, direction, and commitment to environmental protection. Their role requires them to demonstrate commitment, organize for success, train their units, resource the effort, and build the unit's environmental ethic. The success of the unit-level environmental program depends on: receiving adequate guidance and support from the chain of command and installation environmental office, increasing communication at all levels, and establishing an effective management structure. Environmental protection must be incorporated into command policy and guidance and enhanced through the chain of command.

6-11. Leadership direction and support are needed to implement improvements in all facets of environmental stewardship. To that end, unit leaders must ensure that units have active and strong environmental programs that support the installation's environmental program. This chapter addressed typical programs that the unit leader ensures are in place or supported.

ESTABLISHING A UNIT-LEVEL PROGRAM

6-12. To establish an effective unit environmental program, the unit leader should:

- Ensure all unit personnel have had environmental awareness training. Environmental training sources are identified in Chapter 3. Sources of assistance at the installation/garrison/ base are provided in Chapter 5.

Appendix D provides sources of environmental assistance for all operations. Units should use sources that are closest to them before they seek additional/ outside assistance.

- Designate an ECO or a HM/HW Marine who is properly trained and qualified. This individual will interface with appropriate environmental personnel and ensure that the unit is in compliance with environmental laws and regulations.
- Meet with key higher unit staff counterparts (battalion S3/S4 for a company-sized organization) and installation personnel who deal with environmental issues. Find out what their requirements are concerning environmental training, qualifications, and certification of unit personnel, ECAS inspections that may effect the unit, and common environmental problem areas and how to avoid them.
- Ensure the unit has a well-written SOP that addresses environmental issues and procedures that apply to the unit (coordinate environmental requirements with appropriate installation/chain of command personnel). An example is provided at Appendix C.

6-13. The following are unit or installation environmental programs that units develop or adopt:

- HM management.
- HW management.
- HAZCOM.
- Pollution prevention and hazardous waste minimization (HAZMIN).
- Recycling program.
- Spill prevention/response plan.

HAZARDOUS MATERIALS

6-14. The Army's objective is to minimize health hazards and environmental damage caused by the use and misuse of HM. A hazardous material is one that, because of its quantity, concentration, physical, chemical, or infectious characteristics, may do the following:

- Cause, or significantly contribute to, an increase in mortality or an increase in serious, irreversible, or incapacitating reversible illness.
- Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

6-15. If a unit deals with HM, leaders should do the following:

- Ensure the best management practices for all HM.
- Comply with all applicable regulations, policies, and procedures.
- Order and use only what is required; do not stockpile HM.
- Use nonhazardous substitutes to the maximum extent practicable.
- Conserve resources through recovery, recycling, and reuse.
- Establish procedures to identify and correct management deficiencies.
- Establish a training program and ensure that required personnel are properly trained.
- Ensure adequate spill prevention and control equipment are on hand.
- Coordinate training requirements with the chain of command and the installation EMO/safety officer.
- Comply with the chain of command and installation HM requirements.
- Ensure compliance with special disposal/turn-in procedure for batteries.
- Establish HM spill procedures.
- Establish HM fire/explosion procedures.
- Establish emergency first aid procedures.
- Ensure that adequate protective equipment is available.
- Refer to applicable HM references.
    - AR 200-1.
    - AR 700-141.
    - Title 40, CFR, part 761.
    - TM 38-410.

HAZARDOUS WASTE

6-16. The presence of HW is a cause for concern among installation personnel and nearby residential populations. Yet, hazardous substances are an unavoidable part of Army and Marine Corps activities and ultimately result in some waste generation. The proper handling and disposal of these wastes will minimize danger and ensure the safety of people and the environment. If a unit deals with HW, leaders should do the following:

- Establish an HW management program to comply with HW regulations.
- Ensure HW is properly identified. Label stored waste and the containers that hold HW with the correct danger and warning signs.
- Ensure wastes do not accumulate beyond allowable quantity and time limits.
- Maintain proper HW records, and report periodically, as required by EPA.
- Employ waste minimization techniques as a part of pollution prevention efforts.
- Ensure compliance with on-post HW transportation requirements. Contact the installation DRMO or DOL for details.
- Ensure compliance with off-post HW transportation requirements. Public road use increases transportation requirements. Contact installation DOL/FMO for movement approval.
- Ensure drivers transporting HW are qualified. Transporters of HM must be trained by law, according to DOT HM 181 and 126F.
- Establish an HW training program, and ensure proper personnel training occurs. Most installations conduct HW train-the-trainer programs.
- Maintain a liaison with key chain of command and installation personnel.
- Appoint an ECO/(HW/HM) Marine to the unit.
- Ensure the unit ECO/(HM/HW) Marine has sufficient support to carry out his duties.
- Ensure unit personnel use their PPE when handling HW.
- Ensure adequate spill prevention and control equipment is on hand.
- Establish HW fire/explosion procedures.
- Establish HW spill/leak procedures.
- Establish emergency first aid procedures.
- Ensure that unauthorized storage or disposal of HW does not occur. HW must be stored only in authorized containers and disposed of as directed by the EMO/DRMO.
- Refer to applicable HW references.
    - AR 200-1.
    - AR 420-47.
    - RCRA.
    - Title 29, CFR, part 1910.
    - Title 40, CFR, parts 259, 260-281, 300-302, 761.
    - Title 49, CFR, parts 106-178.
    - TM 38-410.

HAZARDOUS COMMUNICATIONS

6-17. An effective HAZCOM program will assist leaders to determine what hazardous chemicals are present in their units, how to protect their soldiers from hazards those chemicals present, and how to properly store and use those chemicals. The installation safety officer is the POC for most HAZCOM matters, the MSDS program, and the HAZCOM training program.

On 13 April 1994, 1SG Smith became the First Sergeant of Company C, 3/151st Infantry, Fort Yukon. One of his first actions was to conduct a walk through the unit area with the platoon sergeants. While in the 2nd platoon's area, the 1SG found a locked room, which the platoon sergeant unlocked. Inside was a collection of cans, bottles, and other containers filled with various solvents and cleaning products. The 1SG told the platoon sergeant to clean up the room. The platoon sergeant passed on the order to the squad leader responsible for the room. The squad leader and his squad quickly removed the room's contents, placing the various containers in the dumpster behind the dining facility. Shortly thereafter, mess personnel placed lunch meal waste into the same dumpster. Almost immediately, the dumpster began to burn and let off large amounts of strange looking smoke. The Fort Yukon Fire Department was called. Upon arrival, the fire chief noticed the smoke's strange color and odor, and determined that it was a chemical fire. Subsequent inquiry determined that the unit's personnel needed training on identifying, storing, and disposing of hazardous material and hazardous waste. The unit's leaders learned that

precise orders needed to be given and that those receiving them should seek clarification for unclear matters. Would this incident have happened in the first place had this unit had effective unit-level environmental programs?

6-18. In support of HAZCOM, unit leaders should do the following:

- Ensure their subordinates receive adequate training on HM to which they are exposed, in accordance with the OSHA requirement.
- Maintain an up-to-date list of all HM/HW known to be present in their area.
- Ensure containers of hazardous substances are labeled, tagged, or otherwise marked to identify the material and warn soldiers of hazards.
- Maintain a MSDS for every HM in their unit (see Appendix C).
- Ensure soldiers/Marines are trained to recognize, understand, and use the MSDS and labels for the HM to which they are exposed.
- Ensure soldiers/Marines use proper procedures when working with hazardous substances.
- Refer to applicable HAZCOM references.
  - AR 40-5.
  - AR 385-10.
  - AR 700-141.
  - Title 29, CFR, part 1910.

POLLUTION PREVENTION AND HAZARDOUS WASTE MINIMIZATION (HAZMIN)

6-19. This program compliments the HM/HW/HAZCOM programs. HAZMIN means reducing the amount and toxicity of the HW generated or produced. Pollution prevention means reducing the amount of material, whether it is hazardous or not. For example, recycle to reduce the amount of trash that goes into landfills.

6-20. Unit leaders should ensure their units conduct inventory control. A unit should not stockpile HM. If a HM has an expired shelf life, it can cost much more to dispose of the item than it did to obtain it, since the HM will have to be handled as an HW.

6-21. Product substitution is an easy way to reduce HW generation. Unit personnel should review the HM inventory in their areas and check if there are nonhazardous or less hazardous substitutes available. Examples are using solvents or replacing the sand used in sandblasting operations with plastic beads, which last longer and can be recycled.

6-22. A process change can reduce the amount of HW generated. A vapor degreaser could be replaced by a soap-and-hot-water parts cleaner. Changing processes in painting operations can reduce overspray and pollution; however, the waste water still needs to be treated as HW, since paint particles can become waste material.

- Refer to applicable pollution prevention and HAZMIN references.
  - AR 200-1.
  - EPA/625/7-88/003.
  - EO 12856.
  - Title III, Clean Air Act Amendments of 1990 (PL101-549).
  - Title 40, CFR, part 262.41.
  - United States Army Environmental Hygiene Agency (USAEHA), Trainer's Guide (TG) No. 178.
  - Environmental Product Guide.

RECYCLING PROGRAM

6-23. The Army and Marine Corps are promoting separating products, substituting materials, and changing procedures to avoid the use of hazardous substances (source reduction), and recycling to reduce the volume of solid waste. Most installations have a recycling program. To support that program, personnel should do the following:

- Recycle all recyclable materials. Recyclable materials include computer printouts, corrugated cardboard, computer punch cards, newspaper, high grade white paper, aluminum cans, plastics, oil, solvents, glass,

steel, and brass. Check with the installation environmental office to verify the material being recycled locally.
- Separate the recycling material source is separated. Contaminated material must be removed from recyclables.
- Refer to applicable recycling references.
  - AR 200-1.
  - EO 13101.

SPILL PREVENTION AND RESPONSE PLAN

6-24. It is Army and Marine Corps policy and a Clean Water Act requirement to prevent oil and hazardous substance spills and to provide prompt response to contain and clean up spills. The discharge of oil or hazardous substance from installations, vehicles, aircraft, and watercraft into the environment without a discharge permit is prohibited. Exceptions will be made in cases of extreme emergency, in which where the discharge is:
- Considered essential to protect human life.
- Authorized by a discharge permit or installation on-scene coordinator (IOSC) during a spill incident response.

6-25. Every reasonable precaution should be taken to prevent spills of oil and hazardous substances. The unit leader should:
- Provide facilities to store, handle, or use oils and hazardous substances and implement proper safety and security measures.
- Appoint a spill coordinator and members of the unit spill response team; this designation should be in writing.
- Maintain an up-to-date spill response plan. This requirement is generated by the installation.
- Conduct periodic spill response drills.
- Ensure sufficient equipment and supplies (absorbent materials) for spill responses are on hand and pre-positioned in the unit. See Appendix C for a sample list.
- Locate all drains, drainage ditches, streams, ponds, and other water sources/outlets in the area, and plan how to prevent a spill from reaching them.
- Coordinate with the installation safety office, preventive medicine office, and EMO to determine the proper PPE. Know when to attempt to clean up a spill and when to leave the area and contact the installation spill response team for cleanup. This determination will be made by the installation EMO and/or spill response team.
- Maintain a copy of the Installation Spill Contingency Plan (ISCP). Critical/necessary information is contained in this plan, available from the environmental management office.
- Maintain a current list of names and phone numbers of those who may need to be contacted in case of an emergency (i.e., fire department, safety office, provost marshal, and preventive medicine, EMO).
- Maintain an up-to-date inventory of all HM/HW; provide a copy to the post fire department for use in case of a chemical fire.
- Ensure pollutants are not discharged into storm or washrack drains or poured on the ground.
- Ensure small spills are properly attended to, cleaned up, and collected. Contaminated soil needs to be disposed of properly. Contact the installation EMO for additional information.
- Strictly control the discharge of ballast water from watercraft.
- Ensure the treatment of waste oil complies with all applicable federal, state, and local requirements.
- Ensure wastes produced during the cleaning of fuel storage tanks and combustion engine components are collected and treated as required before discharge.
- Monitor wastewater discharges containing oil or hazardous substances to comply with permit limits.
- Report oil, fuel, or other hazardous pollutant spills are reported to the EMO and higher headquarters. The S4/G4 and the post EMO can provide information on reportable spill quantities.
- Establish HM/HW fire/explosion procedures.
- Establish emergency first aid procedures.
- Refer to applicable spill prevention references.
  - AR 200-1 (general).
  - Title 40, CFR, part 110 (oil), 302 (hazardous substances), 355 (extremely hazardous substance).

PROGRAM ASSESSMENT

6-26. Environmental compliance status can be determined through a formal inspection by a regulatory agency. It can also be determined through self inspections using ECAS checklists as a guide. Non-Army or Marine Corps regulatory agencies have the legal right and responsibility to inspect units and individual facilities and actions to ensure compliance. Often the first indication that federal, state, or other inspectors are on post is when they visit the installation environmental coordinator's office, or the provost marshal's office, asking for directions to a specific site on the installation.

6-27. Once a year, EPA inspectors conduct spot inspections of installations, often without notice. Local and state inspectors also conduct frequent inspections. Regulatory inspections often concentrate on a particular area, such as HW management. Inspection frequency guidelines have been established under the EPA Federal Facility Compliance Strategy. For example, inspections for HW facilities under the RCRA generally occur annually. Inspections in other programs may occur at different frequencies. Installations and units with specific major problems can expect more frequent follow-up inspections.

6-28. The Army established the ECAS as a means of achieving and monitoring compliance with applicable federal, state, regional, and local environmental laws and regulations. In addition, the Army uses compliance assessment as a vehicle for attaining Army environmental program goals and improving program visibility. If a unit deals with HW and HM, leaders are required to conduct internal inspections. HW coordinators for larger units can request a copy of the ECAS protocol to assist in developing inspections and recordkeeping plans. However, the installation HW management plan should normally contain information sufficient to develop an inspection plan for HW generation points and accumulation sites at the unit level. Contact the environmental office for an ECAS protocol to conduct an internal/selfcompliance assessment.

6-29. OCONUS commanders determine the scope for the ECAS within their commands. They often implement procedures to ensure compliance with applicable host nation, SOFA, and FGS requirements, as well as the requirements of AR 200-1 and AR 200-2.

6-30. G3/S3 and G4/S4 personnel can help to ensure compliance. Appendix H has a generic aid that can be used to assess unit environmental compliance status. The battalion staff or installation environmental office may have similar aids specific to a unit or location. Key installation and personnel for compliance assistance are discussed in Chapter 5.

UNIT SELF-ASSESSMENT

6-31. Unit leaders use the general checklist in Appendix H to assess unit environmental compliance status. Higher level staffs within the chain of command or the installation’s environmental office may have similar aids specific to a unit or location. Units also use ECAS/ECE checklists as a supplement to the self-assessment guide in Appendix H. Unit leaders, with the assistance of the installation’s environmental staff, determine the frequency of self-assessment checks. The commander ensures that the unit’s environmental program management system is effective through selfassessment.

UNIT MANAGEMENT PRACTICES

6-32. Many environmental requirements at the unit level are simply an extension of existing unit management practices. The most basic is ordering only enough supplies to do the job. The presence of HM makes this practice even more important. HM disposal is expensive and carries with it a significant administrative burden.

Hazardous Substance Management System (HSMS)

6-33. The Army’s HSMS is applys centralized management and strict inventory control to reduce the use and disposal requirements for hazardous substances by tracking HM.

Good Housekeeping

6-34. Good housekeeping is another basic management practice. It involves a number of activities in areas such as maintenance, operations, and training. For instance, preventing spills is a good housekeeping practice for both safety and environmental reasons. Keeping noise to a minimum is good OPSEC, and it also reduces noise pollution. Recycling diminishes solid waste and helps eliminate unauthorized disposal of some types of HW.

SOP

6-35. Effective management practices require rules that soldiers and Marines understand and follow. Unit leaders ensure that the unit has a well-written SOP addressing environmental issues and procedures. (See Appendix C for a sample of a unit environmental SOP.)

ECO and HW/HM Marine

6-36. Commanders, down to the company, troop, and battery levels, must designate an ECO. AR 200-1 now requires Army unit commanders to appoint the ECO in writing and provide training for the ECO. The ECO coordinates with the installation's environmental staff and ensures the unit complies with environmental laws and regulations. MCO P1200.7S identifies the specific duties for the Marine version of the ECO, the HW/HM (MOS 9954) Marine. This MOS is assigned as a secondary MOS for a Marine.

6-37. Unit commanders must consider unit missions and environmental requirements when designating the ECO and selecting appropriate training. Once appointed and trained, the ECO becomes the commander's "eyes and ears" on environmental matters.

Training

6-38. Training is another important management practice. Commanders ensure that all unit personnel complete environmental awareness training. The environmental training resources addressed in Chapter 5 and Appendix D provide information/POCs available for training support. Additionally, commanders must identify those soldiers and Marines who require special environmental training (RCRA- or OSHA-mandated training). Installation environmental offices and environmental staffs assist subordinate commanders to determine specific environmental training requirements. Commanders check training records quarterly to ensure that environmental training status is current. See Chapter 3 for a discussion of environmentalspecific training opportunities.

Container Labeling

6-39. Container labeling is a basic management practice often overlooked. Installation or shipping environmental guidelines specify labeling requirements. Labeling HM and HW is a legal requirement. Materials not technically classified as hazardous—cleaning supplies, lubricants, and paints must also be labeled. Labeling these materials with dates allows supply personnel to rotate stocks and issue older items first, a procedure called "first-in-first-out" (FIFO) rotation. FIFO rotation reduces the quantity of outof-date materials requiring disposal.

6-40. Finally, each unit must develop and enforce procedures to maintain complete records of the environmental actions and activities they perform. For example, DOD has requires each of the component services to record and archive pesticide use during military applications. This information is important to document potential risks to human health and the environment from such practices (and to help establish or eliminate causes of unusual incidents). An example of this is the continuing investigation to decipher the causes of many of the ailments associated with Operations Desert Shield/Desert Storm.

MAINTENANCE

6-41. Unit maintenance activities have significant potential for environmental impact. Most Army and Marine Corps environmental programs affect maintenance operations in some way. Some specific areas of concern are as follow:

Spill Prevention and Response

6-42. Army and Marine Corps policy, as well as federal law, requires units to prevent spills of oil and hazardous substances and to provide prompt response to contain and clean up such spills. These laws, regulations, and policies prohibit any discharge of oil or hazardous substance from installations, vehicles, aircraft, and watercraft into the environment without a discharge permit.

6-43. Installation requirements shape spill prevention and response plans for units within their jurisdiction/command. During deployments, the deployment order directs spill prevention and response procedures. During contingency operations or combat, spill prevention and response procedures are defined by HN or theater guidance and the unit SOP (see Tabs A and B, Appendix C). Typical unit-level responsibilities include the following:

- Ensuring that the unit SOP complies with the Installation Spill Contingency Plan (ISCP).
- Providing adequate facilities for storing and handling POL products and hazardous substances.
- Implementing safety and security measures in areas where spills are likely (i.e., maintenance areas, fuel points, supply facilities, and accumulation points.
- Appointing a trained spill coordinator and spill response team.
- Conducting periodic spill response drills.
- Maintaining adequate equipment and supplies for spill response.
- Posting telephone numbers of the installation's spill response agencies.

HM/HW Storage and Handling

6-44. Motor pool personnel work with a variety of HM/HW. The unit's prescribed load list (PLL) section controls requisitions and receipts for HM and prepares documentation for turn-in of HW. Mechanics generate HW by lubricating, servicing, and repairing equipment. Motor pool personnel must:

- Requisition only the minimum amount of HM needed. When possible, substitute nonhazardous materials.
- Practice inventory control of all HM/HW (to include monitoring HM shelf life and HW accumulation dates).
- Store HM/HW in approved containers and locations.
- Maintain an MSDS for each HM used.
- Obtain any necessary/applicable permits.

Refueling

6-45. Refueling operations create significant potential for POL spills and fire hazards. Units must ensure their SOP includes adequate procedures to prevent and respond to spills. Fuel handlers require spill response training. Unit leaders provide all fuel points and refueling vehicles with spill response kits. Since small spills occur often, fuel handlers must remove contaminated soil, absorbents, and rags from the refueling site and dispose of them according to installation guidelines.

SUPPLY

6-46. Unit supply personnel account for all materials during HM/HW requisition, transportation, storage, and disposal. Unit leaders ensure their supply personnel observe stringent HM supply economy measures. Units order only the very minimum amount of HM needed. When possible, supply personnel order biodegradable, environmentally safe materials.

6-47. When storing products, supply personnel ensure first-in-first-out (FIFO) stock rotation to minimize the turn-in of out-of-date material. They also follow installation storage guidelines for marking materials, maintaining MSDSs, and turning in excess materials to the installation's "pharmacy" points. Finally, unit leaders ensure that supply personnel turn-in or dispose of HM/HW according to local regulations. Compliance includes coordinating with the local environmental office and DRMO.

NUCLEAR, BIOLOGICAL, CHEMICAL

6-48. HM are used in NBC defense and training. Unit NBC specialists exercise caution when storing these materials. As with other HM/HW, unit NBC personnel dispose of materials according to local regulations. Unit leaders ensure that the unit's spill response program addresses NBC activities. Unit NBC specialists also monitor turn-in procedures for:

- Batteries for NBC-related equipment.
- Expired NBC supplies.
- Decontaminants.
- Sampling kits.
- Used NBC filters.
- Decontamination solutions.
- Fog oil and its additives.

UNIT MISSION TRAINING

6-49. Unit mission training is a difficult environmental challenge. Unit leaders must exercise caution with noise pollution, air pollution, waste disposal, spill protection, water pollution, and cultural and natural resource protection. Units check with the installation's training staff concerning training area restrictions. During training deployments, unit leaders and ECOs coordinate, in advance, for environmental guidance due to differing local, state, or HN regulations. Upon completion of the unit training, units conduct police of training areas in compliance with installation SOPs.

COMMUNICATIONS

6-50. Modern communication systems use many types of batteries. Used batteries are considered a HW in most states and therefore, unit personnel ensure that SOPs specify storage and disposal procedures for each type of battery in the unit.

OPERATIONS

6-51. Operations at any level of the spectrum of conflict do not automatically suspend environmental considerations. Higher commanders' guidance is critical to determine the risk that will be applied to any operation. Decisions on risk are a normal part of the MDMP. See Chapters 3, 4, and 5 for more information about environmental considerations during planning, training,and operations.

SPECIAL REQUIREMENTS

6-52. In addition to meeting the previously stated requirements, some military units, such as the National Guard (NG) and Reserve Component (RC) units and units stationed in foreign countries, must follow additional environmental guidelines.

NG and RC Component Considerations

6-53. Since NG and RC units are seldom co-located with their supporting HQs, their requirements may differ. NG units routinely operate under environmental regulations and laws of a particular state. NG units coordinate through their STARC for environmental guidance when deploying to installations in other states.

6-54. RC units' where subordinate units may reside in different states and comply with substantially different environmental laws. The supporting HQ develops policies that account for differences in state and local laws and regulations. Units separated from their supporting installation must ensure that SOPs and contingency plans adequately address local laws and regulations.

6-55. Given the distances between NG and RC units and their supporting HQ, HM/HW turn-in may require alternative methods such as line haul or contractor removal. The cost of HM/HW turn-in may warrant pollution prevention initiatives to reduce, reuse, or recycle HM/HW on-site. Solvent distillation, for example, may provide significant cost savings overconventional disposal.

6-56. Disaster relief missions present units with challenging environmental protection requirements. Units must not add their own HM/HW to the existing environmental problem. ECOs in NG units coordinate with their STARC HQ for HM/HW support. Unit ECOs also coordinate regularly with disaster relief HQ to determine threats from HM/HW exposure— polychlorinated biphenyls (PCBs) from transformers, POL, or decaying bodies. Unit leaders ensure their soldiers have appropriate PPE when exposed to HM/HW in the disaster area.

Units Stationed in Foreign Countries

6-57. Since military units stationed in foreign countries must consider local environmental policies, the FGS for each country incorporates, and thus takes precedence over, US federal and state regulations. OCONUS installations develop programs based on the FGS. Units continue to follow installation guidelines but may find them very different from US requirements.

SUMMARY

6-58. Unit commanders are responsible for building and implementing a unit environmental program. They use the assistance that is available to them on the installation/garrison/base staffs as well as from unit higher headquarters. Items to assist that program include such tools as the sample SOP in Appendix C and the unit self-assessment in Appendix H, which provides a generic checklist for units to assess compliance with environmental laws and regulations in their daily operations and activities. Unit leaders should supplement the checklist with applicable state, local, or HN environmental requirements. Once supplemented, this checklist serves as the primary tool for unit environmental assessments. However, self-assessment is only a guide and does not provide a final determination of compliance. ECAS or ECE checklists provide a more comprehensive assessment.

Appendix A

Environmental Regulations, Laws, and Treaties

Environmental issues are a major concern for the Army and the Marine Corps, and with emerging new laws and regulations, environmental protection will continue to have a growing impact on Army and Marine Corps operations. Violations of federal, state, or local environmental laws can result in both civil and criminal penalties. Unit leaders must understand the laws and respond accordingly. They must understand and apply the respective Army or Marine Corps regulations, ensure that unit personnel are properly trained and that all legal and regulatory guidance and requirements (both military and civilian) are met. This appendix provides a brief description of the primary Army and Marine Corps environmental regulations and the principal environmental laws applicable to military activities. Military facilities are subject to federal, state, local and HN environmental laws; when the requirements differ, the most stringent applies. Environmental laws affect almost every military operation. Services do not expect commanders to be legal experts, yet they must understand the requirements of environmental laws and regulations. The installation's environmental staff is the best source of assistance to ensure unit compliance with environmental laws and regulations. As discussed in Chapter 5 and in Appendix D, help is also available to the subordinate unit commander by the higher headquarters' staff, especially during an operation that takes the unit away from an installation. Ignorance of environmental laws is not an excuse for noncompliance, and it will not protect commanders, soldiers/Marines, or the military services from civil and criminal liability. These short synopses of laws and regulations provide only a brief sketch and are not inclusive of all requirements.

SOURCES OF ENVIRONMENTAL LAWS AND REGULATIONS

Federal, state, local, and host nation governments have established laws and regulations to protect human health and natural and cultural resources from environmental degradation. Heightened environmental awareness by the public and the federal government has led agencies to develop policies to support regulatory compliance and stewardship.

The four primary sources of environmental law that influence Army and Marine Corps actions are federal, state, local, and host nation. The President also directs the federal government through the use of EOs and the DOD complies with those directives as it does with any other federal law. DOD/Army/Marine Corps regulations, orders, and pamphlets, identified in this appendix, provide additional guidance for commanders. The Army and Marine Corps will comply with these laws and regulations as they pertain to individual localities or installations, deployments, or operations.

Full compliance with applicable environmental laws and regulations is a necessary cost of doing business. To that end, the Army and Marine Corps are committed to setting the standards for the DOD and other federal agencies as the leaders in compliance with environmental laws, prevention of environmental damage, and the protection and stewardship of natural resources. In doing so, the Army and Marine Corps are making a concerted effort to integrate environmental considerations into all Army and Marine Corps activities.

At most locations, installation environmental support personnel are available to help unit leaders understand the various laws and regulations. These support personnel include the chain of command and key installation personnel (DPW/environmental officer, SJA attorneys, range officers, and so forth). Installation support personnel are addressed in more detail in Chapter 5. Consult with installation environmental agencies on specific requirements for each location. Given the state and local differences on environmental laws, soldiers/Marines need to understand that what is environmentally permissible on one installation may not be permissible on another.

ARMY/MARINE CORPS REGULATIONS, ORDERS, AND PAMPHLETS

AR 200-1

AR 200-1 defines environmental program objectives and assigns management responsibilities. This regulation lists duties and responsibilities for each level of command from DA through the unit level. It also requires company, battery, or troop commanders in the Army, Army NG, and Army RC to appoint trained ECOs. AR 200-1 addresses the following major areas:

- Research and development.
- Water resources.
- Air pollution.
- HM/HW and solid waste.
- Noise.
- Environmental restoration.
- Asbestos.
- Radon reduction.
- Environmental training.

AR 200-2

AR 200-2 implements NEPA within the Army. This regulation sets forth Army policies and responsibilities for the early integration of environmental considerations into Army planning and decision-making. The NEPA process described in this regulation applies to installations and units. This regulation establishes criteria for determining if Army actions are covered under categorical exclusion, or if an EA or EIS is required.

AR 200-3

AR 200-3 addresses land management and maintenance. This regulation provides guidelines for installation staff members having land management responsibilities (DPW, game management, range control, and the environmental office). Land management regulation includes guidelines for the following:

Soil.
Vegetation.
Fish.
Wildlife.
Endangered species.

Forests.
Timber production.
Agricultural leasing.
Other land use purposes that are in the Army's or public's interest.

AR 200-4

AR 200-4 is the Army's policy for managing cultural resources to meet legal compliance requirements and support the military mission. It provides guidance for the treatment of cultural resources, including prehistoric sites, historic buildings and structures, traditional cultural properties, and Indian sacred sites on Army-controlled properties.

This regulation replaces AR 420-40 and has been revised to update the Army's policy for managing cultural resources to meet legal compliance requirements and to support the military mission. Cultural resources are: historic properties as defined in the National Historic Preservation Act (NHPA), cultural items as defined in the Native American Graves Protection and Repatriation Act (NAGPRA); archaeological resources as defined in the Archaeological Resources Protection Act (ARPA), sacred sites as defined in EO 13007 to which access is provided under the American Indian Religious Freedom Act (AIRFA), and collections as defined in 36 Code of Federal Regulation (CFR) 79 Curation of Federally Owned and Administered Collections. Requirements set forth in NEPA, NHPA, ARPA, NAGPRA, AIRFA, 36 CFR 79, EO 13007, and Presidential Memorandum on Government to Government Relations with Native American Tribal Governments define the basis of the Army's compliance responsibilities for managing cultural resources. Regulations applicable to the Army's management of cultural resources include those promulgated by the Advisory Council on Historic Preservation (ACHP) and the National Park Service (NPS). It also requires that installations develop and integrate CRMP to outline procedures for integrating cultural resources managementresponsibilities and mission requirements.

AR 350-4

This regulation sets forth the objectives, responsibilities, and policies for the ITAM Program. ITAM establishes procedures to achieve optimum, sustainable use of training lands by implementing a uniform land management program that includes inventorying and monitoring land conditions, integrating training requirements with land carrying capacity, educating land users to minimize adverse impacts, and providing for training land rehabilitation and maintenance.

AR 420-49

This regulation rescinds AR 420-47. It specifies responsibilities, regulatory requirements, and procedures for HW and solid waste management. The current AR 200-1 incorporates most of these requirements. The solid waste management policy and responsibilities that still apply address solid waste collection procedures and operation of solid waste disposal facilities located on installations.

AR 420-76

This regulation provides policies, standards, and procedures for pest control activities on Army installations. It requires each installation's DPW to prepare and annually update an IPMP. The IPMP lists all program objectives in priority according to the potential or actual impact on health, morale, structures, or property.

Generally, installations limit pest control to the least destructive means by avoiding mass spraying, baiting, and poisoning where possible.

AR 420-76 will be replaced by AR 200-5, which is currently in draft format. AR 200-5 will also incorporate the DOD's 3 measures of merits (MOMs) for pest management, as articulated in Department of Defense Instruction (DODI) 4150.7.

DA PAM 200-1

This pamphlet is a companion to AR 200-2, designed to assist Army users in the preparation and review of EAs and

EISs that stem from NEPA.

DA PAM 200-4

This pamphlet is a companion to AR 200-4. It provides guidance for implementing cultural resources management, and includes applicable statutory and regulatory requirements for cultural resource and Native American programs.

MCO P5090.2A

This regulation (currently dated July 1998) provides guidance and instruction to Marine Corps forces to meet federal, state, and local environmental legislative and regulatory requirements. It is focused on environmental compliance and protection and identifies Marine Corps policy and responsibilities. MCO P5090.2A addresses the following major areas:
- Program management.
- Environmental compliance and protection requirements.
- Environmental media areas.
- Education and training.

The regulation provides guidance to Marine Corps forces operating ashore after disembarking. For guidance while afloat, see NWP 4-11 to incorporate environmental considerations into naval doctrine and reference specific Operational Naval Instruction (OPNAVINST) for guidance/regulations.

FEDERAL LAWS

These laws provide states and federal agencies a legal framework within which to operate. These laws include acts and executive orders. For example, the Federal Facilities Compliance Act (FFCA) allows regulatory agencies to impose civil fines on other federal agencies, like the DA, for violations of the Resource Conservation and Recovery Act (RCRA).

ARCHAEOLOGICAL RESOURCES PROTECTION ACT (ARPA) OF 1979

The ARPA stipulates that anyone excavating archaeological resources on federal lands must have a permit or be subject to civil or criminal penalties. Persons requesting an ARPA permit should be directed to the local US Army Corps of Engineers (USACE), district engineer. Installation law enforcement personnel should be aware of archaeological resources that need protection, and such sites should be monitored regularly.

Unit leader actions include:
- Avoiding digging or conducting operations in or near cultural sites or structures.
- Briefing soldiers/Marines on the importance of avoiding, protecting, and safeguarding archaeological sites, to include not collecting any of the artifacts.
- Reporting the discovery of any artifact and waiting for clearance to resume training.

CLEAN AIR ACT (CAA) OF 1970

The CAA, with amendments, requires the prevention, control, and abatement of air pollution from stationary sources (power plants) and mobile sources (vehicles). It controls the volatile organic compounds (VOCs) from fuel storage and dispensing, spray painting, and solvent use. Additional impacts include open burning, smoke obscurant generation, incineration of waste, and fugitive emissions.

The CAA implementing regulations concerning emission requirements do not apply to tactical vehicles. However, increasingly, stringent requirements for civilian vehicles do apply to other military vehicles. The CAA also controls open burning operations that result in nitrogen oxide (NOX). The inherent CAA requirement to control air pollutants and fugitive dust effects military activities. The CAA also regulates asbestos removal and disposal. Recent amendments include provisions for control of air toxins (hazardous air pollutants), acid rain, and ozone depleting compounds, such as CFC.

Unit leader actions include:

 Advising the chain of command of air pollution sources.
 Identifying and reducing sources of air pollution (dust control in training areas, excessive emissions from poorly maintained vehicles, parts washer emissions, and so forth).
 Using riot control and smoke agents only in approved training areas.

CLEAN WATER ACT (CWA) OF 1972

The CWA, amended in 1977, regulates point source discharges into US waters. This law applies most often to industrial facilities, sewage treatment facilities, and ships. Requirements for oil and HM spill reporting and waterways clean up affect military operations, including river crossings and amphibious actions. The CWA requires spill prevention plans for sites that store significant quantities of petroleum products.

The CWA also regulates storm water runoff from certain industrial sources and requires permits for activities that affect wetlands. There is also an inherent requirement to prevent soil erosion during construction and earth moving activities. Units must ensure that ground disturbed during tactical operations and training is preserved from future soil erosion.

Unit leader actions include:

 Knowing the locations of surface water and groundwater in the training areas or areas of operations.
 Planning and conducting training, operations, and logistics activities to avoid surface and groundwater areas where possible.
 Crossing streams and ditches only at designated vehicle crossing locations.
 Ensuring soldiers use designated vehicle wash areas and do not perform maintenance or refuel vehicles or equipment where a spill can easily contaminate surface water or groundwater.
 Ensuring released or spilled vehicle fluids do not contaminate surface water or groundwater. Taking immediate corrective action should oil or hazardous substance spills occur.
 Reporting all spills/releases as stated in the ISCP.
 Using proper preventive medicine and sanitation procedures to prevent surface water and groundwater contamination.
 Disposing of liquid waste from kitchens, showers, and baths properly.
 Avoiding entering terrain drainage areas with vehicles unless the area is dry and the ground will support such activities.
 Ensuring soldiers/Marines do not pour chemicals into sinks or storm drains.

For wetland and coastal water areas unit leader actions include:

 Requesting a map of designated wetlands and coastal water areas from the environmental office or range control.
 Ensuring soldiers/Marines are aware of wetland and coastal water areas and the restrictions for each area.
 Planning and conducting training, operations, and logistics activities without contaminating or causing unnecessary damage.
 Ensuring soldiers/Marines use designated vehicle wash areas and do not perform maintenance or refuel vehicles/equipment in these areas.
 Crossing streams and ditches only at designated vehicle crossings.
 Ensuring permits are obtained before any operations resulting in dredging or filling of wetlands.

For erosion control and its associated considerations, unit leader actions include:

 Verifying restrictions with range control.
 Briefing soldiers/Marines on environmental and safety considerations before field training.
 Planning missions to reduce the possibility of erosion. Prohibiting the use of live vegetation unless permitted; driving or parking vehicles close to trees; and cutting trees without permission from range control or the installation

forester.
 Avoiding compaction of soil to the point that water can no longer percolate through it.
 Avoiding tactical maneuvers in erosion-susceptible areas, and refilling all fighting positions.
 Reducing maneuvers during periods of high rainfalls and saturated soil conditions.
 Making maximum use of existing roads and trails.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)OF 1980

The CERCLA, known as Superfund since its enactment in 1980, regulates past releases of HM into the environment. This act establishes personal liability of the individual responsible for the release. The Superfund Amendments and Reauthorization Act (SARA) amended the CERCLA in 1986. Together, these laws establish the "superfund" program to clean up HW sites. The corresponding DOD program is the IRP. The IRP helps identify, investigate, and clean up contamination on DOD property.

Unit leader actions include:

 Reporting any suspected contamination site to the chain of command.
 Ensuring soldiers/Marines understand the environmental ethic and apply it to avoid any future liabilities.
 Disposing properly of all HM/HW.

EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT (EPCRA) OF 1986

The EPCRA provides a mechanism for informing local populations about possible chemical hazards in the community. Also known as SARA Title III, the EPCRA originally applied only to industry. EO 12856 now extends the EPCRA to federal facilities, including DOD. EPCRA requires military installations to plan for effective emergency procedures in the event of a spill or other uncontrolled release of HMs.

The EPCRA also requires local governments to prepare for the emergency release of HM by appointing a local emergency planning committee (LEPC). Facilities with HM operations submit nonclassified inventories to the LEPC and immediately notify the LEPC when any release of HM occurs in quantities greater than permissible levels. Installations prepare annual reports of HM released through accident and normal operations.

Unit leader actions with regard to EPCRA include:

 Training soldiers/Marines on spill prevention planning, reporting, and cleanup IAW the ISCP.
 Maintaining a current HM inventory and an MSDS for every HM in the unit. Providing a copy of the HM inventory to the fire department or installation EMO.
 Complying with the ISCP.

ENDANGERED SPECIES ACT (ESA) OF 1973

This act, as amended, protects threatened or endangered plants and animals (to include fish, insects, and invertebrates). All federal agencies ensure their actions do not jeopardize threatened or endangered species or their habitats. The Secretary of the Interior publishes lists of endangered and threatened species in the Federal Register.

The ESA prohibits anyone from “taking”, harassing or harming, a listed fish and wildlife species unless permitted by the ESA. Additionally, the ESA makes it unlawful to remove or to maliciously damage or destroy listed plants in areas under federal jurisdiction.

The ESA prohibits the destruction, capture, trading, selling, or buying of listed species. The DOD consults with the National Marine Fisheries and the USFWS before taking any action that may effect, adversely or beneficially, a listed species or designated critical habitat.

Unit leader actions include:

 Enforcing range control and installation environmental regulations.
 Avoiding actions that could harm protected plants and animals and their habitats on the installation and any off-post training areas.
 Recognizing threatened and endangered species' habitat and avoiding it during training, operations, and logistics activities.
 Marking environmentally sensitive areas as restricted movement areas during field training.
 Consulting the environmental office for other local requirements relating to wildlife and natural vegetation.
 Avoiding cutting brush and trees for camouflage.
 Coordinating with Preventive Medicine.
 Avoiding damage to marked wildlife food plots and watering areas.
 Complying with the installation endangered species management plan.

FEDERAL FACILITIES COMPLIANCE ACT (FFCA) OF 1992

The FFCA applies only to HW and solid waste requirements of the RCRA. This act represents, however, a growing consensus that federal facilities should comply with environmental laws in the same manner as private, nongovernmental civilian agencies.

Originally passed in 1992, the FFCA subjects DOD employees at all levels to personal criminal liability for environmental violations of any federal or state solid waste or HW law. Criminal sanctions under the federal HW law (RCRA) include a maximum fine of up to $250,000, a jail sentence of up to 15 years, or both. The FFCA also allows regulatory agencies to issue NOVs, and impose civil fines and administrative action for solid waste and HW violations.

Unit leader actions include:

 Cooperating with environmental inspectors.
 Performing assessments of the work areas of soldiers/Marines to ensure compliance with environmental guidelines.
 Informing the chain of command when environmental problems are discovered.

FEDERAL INSECTICIDE FUNGICIDE, AND RODENTICIDE ACT (FIFRA) OF 1972

The FIFRA requires licensing or registering pesticide products by the US EPA. It also requires proper management of pesticide use, storage, and disposal. Only certified personnel, or someone under the direct supervision of a certified person, may use restricted use pesticides. IPM is the Army's comprehensive approach to the prevention, elimination, and control of pests. he IPM concept addresses pest problems in various ways and considers all options for pest removal/control.

Unit leader actions include:

 Ensuring field sanitation teams are properly trained in the use of HM in the field sanitation kit (i.e., pesticides, rodenticides, insecticides [insect repellent], and fungicides [foot powder]).
 Employing procedures IAW FM 21-10 and FM 21-10-1.
 Notifying the installation DPW or G4 (Marines) concerning pest control in unit billets and dining facilities.

FEDERAL HAZARDOUS MATERIALS TRANSPORTATION LAW (FEDERAL HAZMAT LAW) OF 1988

Formerly known as the Hazardous Materials Transportation Act (HMTA), this law authorizes the US DOT to issue interstate and intrastate regulations related to transportation of HM. DOT oversight applies to; packing and repacking; handling; labeling, marking, and placarding; routing.

In addition, the HMTA establishes record keeping requirements and a registration program for shippers, carriers, and container manufacturers. Units most commonly haul HM in the form of POL products and ordnance. Units comply with these requirements during operations and deployments that require vehicle movement or convoys on

federal and state highways.

Unit leader actions include:

 Training soldiers/Marines on proper transportation procedures to include vehicle placarding, material packaging, vehicle loading, operator requirements, safety precautions, and spill procedures.
 Ensuring accountability for all HM.
 Applying the risk management process to each unit movement requirement.

MARINE MAMMAL PROTECTION ACT (MMPA) OF 1972

The MMPA provides protection for marine mammals. The MMPA also prohibits hunting or harvesting these animals except by permit. As defined by the MMPA, marine mammals include the following:

 Whales.
 Dolphins (porpoises).
 Sea otters.
 Polar bears.
 Any mammal morphologically adapted to the marine environment. Unit leader actions include:
 Ensuring soldiers/Marines understand they are not to harass, capture, or injure marine mammals.
 Planning operations to avoid sensitive marine mammal habitats.
 Reporting suspected violations through the chain of command.

MILITARY MUNITIONS RULE OF 1997

This rule amends RCRA and identifies when conventional and chemical munitions become HW under the RCRA. It is a minimum federal standard for management of waste military munitions and provides new procedures for the storage, transport, and disposal of such waste. The DOD, other federal agencies, and government contractors who produce or use military munitions for the DOD are affected by this rule. States may adopt military munitions requirements more stringent than the federal rules.

Unused munitions become waste when abandoned (i.e., buried, landfill, dumped at sea, etc.); detonated (except as a consequence of intended use); burned, incinerated, or treated before disposal; removed from storage for treatment/disposal; deteriorated or damaged beyond repair; recycled, or reused; or declared a waste by an authorized military official.

Military munitions are not waste when used for their intended purpose, such as for training or part of research, development, testing, and evaluation activities, or during range clearance activities on active and inactive ranges. This rule excludes unused munitions that are repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subject to materials recovery activities. Assignment of a particular condition code or placement in one of DOD's demilitarization accounts is not dispositive of whether an item is a waste because many of these materials are subjected to recovery, reuse, and recycling activities. (See the actions associated with the Federal Hazardous Materials Transportation Law of 1998.)

Unit leader actions include:

 Training soldiers/Marines on proper procedures for the transportation, storage, handling, and turn-in of military munitions.
 Ensuring accountability for all munitions.
 Reporting all problems with damaged or malfunctioning munitions through the chain of command and the issuing/turn-in facility.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) OF 1969

The NEPA affects virtually every proposed action on military installations. Installations pay particular attention to

actions that may present a danger to the health, safety, or welfare of civilian and military personnel, or may cause irreparable harm to animal or plant life. The NEPA requires federal agencies to consider the environmental impacts of their actions during planning and decision making.

Installations document these considerations, while ensuring public involvement in the planning process. Only those actions categorically excluded from NEPA documentation requirements are exempt. (See Chapter 4 and AR 200-2 for a list of categorical exclusions.) EO 12114 extends the application of the NEPA philosophy to major federal actions in foreign nations.

Unit leader actions include:

- Identifying areas of environmental concern.
- Identifying mission-related environmental risks.
- Identifying potential effects of environmental factors on missions and operations.
- Discussing environmental risk in training meetings and briefings.
- Identifying alternative training scenarios and techniques.
- Consulting installation environmental office personnel regarding requirements for NEPA documentation.

NATIONAL HISTORIC PRESERVATION ACT (NHPA) OF 1966

The NHPA requires federal agencies to consider the effects of their actions, such as construction, leasing, land transactions, and base realignment and closure (BRAC), on cultural and historic resources. The act seeks to safeguard against the loss of irreplaceable historic properties, especially those located on federal land. Many Army and Marine Corps facilities are located on historic and archaeological sites, to include prehistoric settlements and 19th century cantonments.

Unit leader actions include:

- Identifying and recognizing possible archaeological and historical artifacts, sites, and structures.
- Planning and conducting training, operations, and logistics activities to avoid damage to archaeological or historic artifacts, sites, or structures.
- Instructing soldiers/Marines to leave historic artifacts in place and report newly discovered items to the chain-of-command.
- Reporting vandalism, theft, or damage to historic, cultural, or archaeological sites.

NATIVE AMERICAN GRAVES REPARATION ACT (NAGPRA) OF 1990

The intent of this act is to ensure the protection and rightful disposition of Native American cultural items, including human remains, from federal lands. It establishes a consultation process for the intentional excavation or inadvertent discovery of NAGPRA cultural items. Soldiers and Marines must immediately report the discovery of Native American remains and artifacts.

Unit leader actions include:

- Identifying and recognizing possible Native American historic artifacts, sites, and remains.
- Planning and conducting training, operations, and logistics activities to avoid damage to Native American historic artifacts, sites, or remains.
- Instructing soldiers/Marines to leave Native American historic artifacts, sites, or remains in place and report newly discovered items to the chain-of-command.
- Reporting vandalism, theft, or damage to Native American artifacts, sites, or remains.

NOISE CONTROL ACT (NCA) OF 1972

The NCA establishes a national policy to promote an environment free from noise that jeopardizes the public's health and welfare. It also regulates noise emissions from commercial equipment, such as transportation and

construction equipment. The NCA exempts noise from military weapons or combat equipment. However, the goal of the Army's environmental noise abatement program is to achieve compliance with applicable noise regulations in a manner consistent with mission accomplishment.

Unit leader actions include:

 Complying with local and installation noise restrictions.
 Maintaining equipment to perform to maintenance specifications.
 Checking with range control to confirm installation compatible use zone (ICUZ) program requirements.

OIL POLLUTION ACT (OPA) OF 1990

The OPA is far more comprehensive and stringent than any previous US or international oil pollution liability and prevention law. It is divided into nine titles focused on oil spills by vessels and facilities. It is principally a response to events like the grounding of the *Exxon Valdez* and several subsequent accidents in 1989/1990. It establishes a standard for measuring natural resource damage applicable to all actions for such damage.

Additionally, it emphasizes federal direction of public and private efforts both of the response to avert the threat of an oil spill and of removal of oil that has been spilled. The act specifies federal preeminence in undertaking and directing response actions but preserves state authority over significant aspects of removal activities.

Unit leader actions include:

 Training unit spill prevention/response teams.
 Reporting all known or suspected spills through the chain of command and IAW your unit SOP.
 Complying with the ISCP.
 Applying the risk management process to each operation to reduce the probability and severity of potential spills.

QUIET COMMUNITIES ACT OF (QCA) 1978

The QCA amended the NCA to allow local communities to develop ordinances controlling unnecessarily loud noises. To minimize contention between installations and surrounding communities, the DOD established the installation compatible use zone (ICUZ) program. Following are the program's objectives:
 Assessing environmental impacts of the noise produced by proposed actions and both on-post and off-post noise sources.
 Complying with federal regulations.
 Ensuring installation mission compatibility with local land use.
 Minimizing environmental noise impact through engineering, operational controls, siting, and architecture.
 Protecting the health and welfare of all individuals adjacent to installations.
Unit leader actions include:
 Complying with local and installation noise restrictions.
 Maintaining equipment to perform to maintenance specifications.
 Confirming installation compatible use zone (ICUZ) program requirements with range control.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) OF 1976

The RCRA (originally the Solid Waste Disposal Act), with amendments, establishes guidelines and standards for HW generation, transportation, treatment, storage, and disposal. All states require RCRA operating permits for HW treatment, storage, and disposal facilities (TSDF). The RCRA also covers the laws surrounding the disposal of solid waste to include solid waste management, landfill regulation, recycling, and affirmative procurement.

RCRA regulations require training for soldiers and Marines handling or managing HM. It also requires management of underground storage tanks (USTs) and clean up of hydrocarbon contamination.

Unit leader actions include:

 Complying with the installation HW management plan.
 Supporting the installation recycling program (ensuring soldiers/ Marines understand its importance).
 Removing expended brass, communications wire, concertina, and trip wires from waste (see the Military Munitions Rule).
 Conducting police calls to collect and dispose of solid waste (trash).
 Disposing of kitchen waste only as authorized; prohibiting garbage burning/burying.
 Ensuring the unit SOP covers HW and HM, including spill contingencies.
 Collecting and turn-in HW/HM according to local and installation procedures, both in garrison and in the field.
 Properly cleaning up, reporting, and documenting any hazardous spills.
 Transporting HW according to local and installation procedures.
 Conducting maintenance, and allowing the use of HM only after soldiers/Marines have been properly trained.
 Ensuring the unit ECO is properly trained and that the training is documented.
 Maintaining a current HM inventory and an MSDS for every HM in the unit. Providing a copy of the HM inventory to the fire department or installation EMO.

SAFE DRINKING WATER ACT (SDWA) OF 1974

The SDWA regulates drinking water quality. It bases assessments of water quality on levels of pollutants present in the water. Water supply facility managers analyze treated water regularly. If the water quality is below standards, water supply providers notify their customers. The Army's program objectives are to conserve water resources by implementing conservation plans and to provide drinking water that meets regulatory standards.

Unit leader actions include:

 Enforcing the installation water conservation plan.
 Briefing soldiers/Marines on the impact of polluting water sources.
 Employing pollution prevention practices.
 Reporting all concerns about water quality through the chain of command.

SIKES ACT (SA) OF 1985

The SA, as amended in November 1989, allows each military department to provide services for fish and wildlife management. The military also prioritizes work with federal and state fish and wildlife conservation agencies. An installation’s fish and wildlife management program operates under a cooperative plan mutually agreed to by the installation commander, the regional office of the USFWS, and the state agency designated by the host state.

Unit leader actions include:

 Enforcing range control and installation environmental regulations.
 Avoiding actions that could harm protected animals and their habitat on the installation and any off-post training areas.
 Recognizing threatened and endangered species’ habitat and avoiding it during training, operations, and logistics activities.
 Marking environmentally sensitive areas as restricted movement areas during field training.
 Consulting with the environmental office for other local requirements relating to fish and wildlife.
 Avoiding damage to marked wildlife food plots and watering areas.
 Complying with the installation endangered species management plan.

TOXIC SUBSTANCES CONTROL ACT (TSCA) OF 1976

The TSCA places restrictions on certain chemical substances. These restrictions seek to limit human and environmental exposure to highly toxic substances, including CFCs, polychlorinated biphenyls (PCBs), and

asbestos. TSCA requires chemical testing of substances entering the environment. It also regulates the release of these chemicals.

Unit leader actions include:

 Reporting any suspected asbestos containing material or PCBs to the installation EMO.
 Training all soldiers/Marines (mechanics) that perform maintenance on any air conditioning system on proper procedures for the use, recovery, recycling, or disposal of refrigerants.

EXECUTIVE ORDERS

EO 11987

Dated 24 May 1977, this order directs all federal agencies to prevent the introduction of exotic species (all plants and animals not occurring, either presently or historically, in any ecosystem of the US) into the natural ecosystems of the US. ("US" means all of the fifty states, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands.) This order is of special importance when addressing redeployments to the US from areas outside the US.

EO 11988

Dated 24 May 1977, this order (Floodplain Management) addresses the actions federal agencies must take to identify and protect floodplains. Additionally, it directs agencies to take into consideration the effects of actions in a floodplain. The intent is to seek to preserve and enhance the natural value of floodplains. This intent includes minimizing the risk of losses from flooding.

EO 11990

Dated 24 May 1977, this order (Protection of Wetlands) addresses the actions federal agencies must take to identify and protect wetlands. Additionally, it directs agencies to take into consideration the effects of actions in wetlands. The intent is to preserve and enhance the natural values of wetlands and to minimize the risk of wetland destruction.

EO 12088

Dated 13 October 1978, this order (Federal Compliance with Pollution Control Standards) links federal environmental regulations and federal facilities. It directs all federal facilities to control and monitor environmental pollution in compliance with federal environmental regulations. This order also established the A-106 (1383) reporting process, now referred to as environmental program requirements. In November 1988, the EPA issued the Federal Facilities Compliance Strategy, also known as the EPA Yellow Book, which establishes a comprehensive and proactive approach by which federal facilities may comply with federal regulations.

EO 12114

Dated 4 January 1979, this order (Environmental Effects Abroad of Major Federal Actions) addresses environmental effects of major federal actions abroad. It establishes procedures for federal agencies in foreign countries and global communities to consider the effects of their actions on the environment. The Department of State supervises and coordinates these efforts overseas. The objective of this program is to provide information to decision-makers, increase awareness and interest in environmental concerns, and encourage environmental cooperation with foreign nations.

EO 12580

Signed on 23 January 1987, this order (Superfund Implementation) amended EO 12088, which delegates CERCLA duties and powers (as amended by the SARA). It provides for a National Contingency Plan (NCP) to provide national and regional response teams to plan and coordinate HM/HW preparedness and response actions. The

response teams may include representatives from state and local governments.

EO 12856

Dated 6 August 1993, this order (Federal Compliance With Right-To-Know Laws and Pollution Prevention Requirements) challenges the federal government to publicly lead by example by applying source reduction in the management of its facilities and in its acquisition practices. It commitsfederal agencies to publicly report toxic wastes and emissions and to reduce toxic releases by at least fifty percent by 1999. By preventing pollution, the federal government not only protects the environment, but it also saves the taxpayers money by reducing waste management costs and long-term liability for expensive clean up. This order requires that all federal facilities comply with the provisions of the EPCRA, which previously applied only to industry.

EO 12898

Dated 11 February 1994, this order (Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations) directs each federal agency to conduct its programs, policies, and activities that substantially effect human health or environment in an appropriate manner. This manner ensures that such programs, policies, and activities do not exclude persons (including populations) from participating, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under such programs, policies, and activities because of their race, color, or national origin.

EO 13007

Dated 24 May 1996, this order (Indian Sacred Sites), provides direction to federal agencies on managing Native American sacred sites. It requires that federal agencies allow Native Americans reasonable access to lands that contain sacred sites. Further, federal agencies must avoid adversely effecting the “physical integrity” of sacred sites and ensure reasonable notice is provided to Indian tribes when land management policies may restrict future access or adversely effect sacred sites.

EO 13101

Dated 14 September 1998, this order (Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition) replaces EO 12995 and EO 12873. It requires federal agencies to incorporate waste prevention and recycling into their daily operations and implement cost effective procurement preference programs for recycled and environmentally preferable products and services. It is the national policy to prefer pollution prevention, whenever feasible. Pollution that cannot be prevented should be recycled; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner. Disposal should be employed only as a last resort. Federal agencies shall comply with executive branch policies for the acquisition and use of environmentally preferable products and services and implement cost-effective procurement preference programs favoring the purchase of these products and services.

OTHER EO INFORMATION

For information on other environmentally related EOs, or the exact text of a particular EO, you may want to refer to the web site address at http://www.denix.osd.mil/denix/Public/Legislation/EO/toc.html or the web site at http://128.174.5.51/.

STATE LAWS

Each state has its own regulatory organization charged with developing and implementing environmental regulations. Many of the state regulations parallel federal environmental regulations and are often more stringent.

LOCAL LAWS

Local laws and ordinances address the concerns of the local communities. Generally, they are based on federal and

state laws. However, each municipality or community may place more stringent restrictions on certain activities (noise restrictions during certain hours of the day).

HOST NATION LAW/FINAL GOVERNING STANDARDS

The Army and Marine Corps are committed to actively addressing environmental quality issues in relations with neighboring communities and assuring that consideration of the environment is an integral part of all decisions. Installations and units OCONUS that are not subject to federal environmental regulations promulgated by EPA will, in areas where a HN has minimal or no environmental laws and regulations, comply with AR 200- 1 and 200-2. In countries where there are HN laws, the FGS will be used according to the executive agent of that country.

INTERNATIONAL LAWS AND TREATIES

- Biological Diversity Convention.
- International Tropical Timber Agreement.
- International Convention for the Prevention of Pollution from Ships.
- Convention on International Trade in Endangered Species.
- Basel Convention (HW).
- NOX Protocol (air pollution).
- London Dumping Convention (marine pollution from ships dumping wastes generated on land).
- Montreal Protocol (ozone depleting substances).
- Kyoto Accord (greenhouse gases).

US armed forces are obligated to abide by the provisions of treaties and conventions to which the US is bound. These treaties can impact military operations in several ways. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, for example, could limit HW disposal options available to a deployed force. While this treaty has not been ratified by the Senate at this time, the US is still a signatory to it. Whether bound by a treaty or not, its mere existence may affect operations. Recent examples from Bosnia-Herzegovina have confirmed this situation. See CALL Newsletter 99-9 for more information on this recent example.

Another body of laws that effect US military forces are international treaties that govern armed conflict, known collectively as Environmental Laws of War (ELOW). One such treaty is the Convention on the Prohibition of Military or any Other Hostile Use of ENMOD. This treaty prohibits any military use of ENMOD, any technique for changing, through the deliberate manipulation of natural processes, the dynamics, composition, or structure of the environment. The terms in the ENMOD Convention are broadly defined and subject to interpretation by each nation.

The 1977 Protocol I addition to the 1949 Geneva Convention also places restrictions on environmental warfare—using terms similar to those in the ENMOD Convention. This convention requires combatants to "...protect the natural environment against widespread, long-term, and severe damage" during war. This protection includes a prohibition of the use of methods or means of warfare that could cause extensive damage to the natural environment and endanger the health or survival of the population. This convention also prohibits attacks against the natural environment as a means of reprisal. Although the United States has not ratified all of the provisions of Protocol I, the provisions, as applied by other nations, may still affect operations. Commanders must consult the SJA for specific advice on international laws or conventions.

ENVIRONMENTAL COMPLIANCE ENFORCEMENT

Under the FFCA, federal and state environmental regulatory agencies can impose civil fines on federal agencies, including the Army and Marine Corps, for RCRA violations. For the Army and Marine Corps, penalties can be fines, damage awards, and intervention from the EPA and other federal, state, and regional agencies. An additional consequence is an increase in monitoring by these agencies.

Unit leaders and their subordinates are required to comply with all federal, state, and local laws designed to protect

the environment. Violators can be
held personally liable for clean up costs and civil or criminal penalties. Violators include the actual person who causes contamination and the commanders, supervisors, and leaders who allowed the contamination to occur and did not take immediate action to prevent or correct the occurrence. The penalty can be up to $50,000 for each day of violation and/or up to two years in jail.

Checklist of Actions Before Training

Leaders can use the following checklists to plan training and related activities. This checklist is not all inclusive. Supplement it to fit your unique unit and mission requirements.

General

- [ ] Are environmental considerations part of training conditions and standards?
- [ ] Are leaders including the "environmental considerations" in the long, short, and near-term planning?
- [ ] Are forecasted weather considerations included in planned training?
- [ ] Are alternative missions planned?

Area of Operation

- [ ] Has range clearance been obtained?
- [ ] Have special land-use permits been obtained?
- [ ] Are areas of environmental concern verified during site reconnaissance?
- [ ] Are leaders reviewing previous environmental issues and problems that are applicable to the operations/training about to be conducted to identify lessons learned and plan preventive measures?

Personnel Preparation

- [ ] Do soldiers understand their responsibilities in reducing generation of HW and minimizing damage to the environment?
- [ ] Have all soldiers been briefed on range restrictions, endangered species, the appropriate use of vegetation for camouflage, archeological sites, and other sensitive environmental resources?
- [ ] Are identified environmental risks discussed in unit training meetings?
- [ ] Are transporters of HM trained according to DOT HM 181 and 126F?

Operations Preparation

- [ ] Has an environmental risk-assessment been performed?

- [ ] Are rehearsals conducted to ensure that all safety and environmental considerations are satisfied?
- [ ] Has the unit's SOP been reviewed for procedures concerning environmental protection?
- [ ] When the unit transports hazardous materials (explosives, and petroleum, oil, and lubricants (POL)), are the materials checked to ensure that they are properly labeled and that a MSDS is present for each substance?
- [ ] Are provisions made for handling medical wastes (if applicable)?
- [ ] Are provisions made for handling human and solid wastes?
- [ ] Are needed tools, equipment, and materials available to respond to environmental emergencies?
- [ ] Are personnel designated for the spill-response team(s) properly trained and aware of their assignment?
- [ ] Are team members aware of the procedure for requesting additional spill assistance if required?
- [ ] Has all training received by the spill-response team(s) been documented and placed on file in the unit?

Chain of Command

- [ ] Have the battalion commander and the S3 been briefed on the training?

Unit Specific Items

Checklist of Actions During Training

General

- [ ] Are all unit personnel knowledgeable of "off-limits" areas?
- [ ] Do you have approval for fighting positions, tank ditches, and so forth?
- [ ] Are range conditions and restrictions known?
- [ ] Is downtime used for conducting hip-pocket training on environmental concerns?
- [ ] Are leaders monitoring high-risk operations and activities?

Noise Reduction

- [ ] Are leaders explaining about and marking hazardous-noise areas?
- [ ] Are units avoiding unnecessary noise by not revving engines?
- [ ] Are units complying with community/installation noise-abatement hours?
- [ ] Are vehicles avoiding unnecessary noise by obeying speed limits?

Minimizing Vehicle-Movement Damage

- [ ] Are soldiers driving vehicles on secondary roads and bypasses whenever possible to minimize on-road damage?
- [ ] Are soldiers moving vehicles into bivouac or assembly areas in columns?
- [ ] Are soldiers designated to remove mud and debris immediately from roadways?
- [ ] When soldiers drive off road, do they stay on marked trails and routes, thus minimizing cross-country movement?
- [ ] Do soldiers drive carefully in wooded areas to avoid vehicle damage to vegetation?
- [ ] Do soldiers cross streams and ditches only at approved crossings?

Wetlands (marshes, swamps, bogs)

- [ ] Is a special permit obtained (if required) to train in the wetland areas?
- [ ] Are sensitive and "off-limits" areas designated and well marked?
- [ ] If possible, is the use of vehicles and other destructive activities avoided?
- [ ] Are soldiers using designated bridges and crossing sites, when driving?
- [ ] Are units avoiding discharging wastewater into wetlands or waterways?
- [ ] Are units prohibiting refueling or field-maintenance operations near or in wetlands or surface waters?
- [ ] Are units avoiding filling any wetland areas?

Threatened/Endangered Species and Other Protected Wildlife/Vegetation/Habitat

- [ ] Are soldiers exercising due care in not disturbing/destroying threatened/endangered species, habitats, and sensitive areas?
- [ ] Are sensitive areas marked off?

Cultural Resources

- [ ] Are units avoiding digging in or near these sites or structures?
- [ ] Are soldiers instructed to not modify or destroy these sites in any way?
- [ ] Do soldiers understand that the destruction or defacing of archeological sites is a violation of the law?
- [ ] Are soldiers instructed to report immediately the discovery of any artifacts and wait for clearance to resume training?

Camouflage

- [ ] Are units exercising care that ground cover is not stripped bare of vegetation?
- [ ] Are units using camouflage nets, whenever possible, instead of live vegetation?
- [ ] Are soldiers briefed concerning the local camouflage policy?

Waste Disposal

- [ ] Is each unit policing its training area?
- [ ] Are units establishing designated collection points for proper trash disposal?
- [ ] Are field-kitchen wastes being disposed only as authorized?

Waste Disposal

- [ ] Are mechanical and human wastes being disposed in an approved manner?
- [ ] Are units following local policies and procedures (outlined in Field Manual (FM) 21 -1 0) when disposing of liquid waste from kitchens, showers, and baths?

Hazardous Material and Waste Handling

- [ ] Are units complying with the installation environmental management office (EMO) procedures for the turn in and disposal of hazardous waste?
- [ ] Are units obtaining approval before using a riot-control chemical agent (CS) and smoke?
- [ ] Are unexploded munitions being properly marked and reported.
- [ ] Are spill teams designated and trained?
- [ ] Are needed spill-response equipment and material available?
- [ ] Are units minimizing the use of hazardous chemicals?

- [ ] Are units placing hazardous waste and POL waste products in separate containers?
- [ ] Are units delivering hazardous waste and POL waste products to a designated waste-collection point.?
- [ ] Are units ensuring that POL and vehicle maintenance waste products are not dumped into sewers, ditches, or streams
- [ ] Are spill teams responding immediately to reported spill locations?
- [ ] Are spill teams trained on fire/explosion procedures?
- [ ] Are spill teams trained in emergency first aid?
- [ ] Are spills reported as required by local regulations and unit SOP?

Refueling and Maintenance

- [ ] Are vehicles refueling only at designated sites?
- [ ] Are soldiers protecting ground surfaces, using POL drip pans?
- [ ] Are units ensuring that POL-absorbing compounds are present during refueling operations?
- [ ] Are units avoiding the performance of field services and maintenance activities near wetlands, streams, or other bodies of water?

Chain of Command

- [ ] Have the battalion commander and the S3 been briefed on the training?

Unit Specific Items

Checklist of Actions After Training

- [ ] Are units avoiding washing vehicles in natural bodies of water and using only designated vehicle wash facilities and equipment.?
- [ ] Are fighting positions, gun emplacements, and other holes being properly refilled?
- [ ] Are communications and barrier wires being collected?
- [ ] Are all wastes (litter, ammo brass, and so forth) being properly policed and removed?
- [ ] Are unexploded munitions being properly marked and reported? El Are hazardous spills being reported and cleaned up?
- [ ] Are leaders inspecting the range and training areas before obtaining range control clearance?
- [ ] During assessment of soldiers' proficiency, has it been noted how well they understood and followed environmental requirements?
- [ ] Are environmental concerns addressed in the unit's evaluation report and included in AARS?

Chain of Command

- [ ] Have the battalion commander and the S3 been briefed on the training?

Unit Specific Items

STUDENT HANDOUT 3

EXTRACT FROM FM 3-100.4

APPENDIX G

Practical Application of Assessing Environmental-Related Risk

This appendix provides a practical application of assessing environmental-related risk. This exercise uses the five-step process of risk management described in Chapter 4. This exercise also employs the risk-management work sheet to document and track risk. Although the following scenario depicts a field-training exercise (FTX), units use these procedures to assess environmental-related risk during all operations. This scenario concentrates specifically on environmental-related risk; however, these risks would be incorporated into the company's overall risk-management plan. Samples of a completed work sheet are shown in Figures 2 through 7, immediately following this explanation.

The 586th Assault Float Bridge (AFB) Company will conduct a five-day FTX in Anatuvak training area of Camp Yukon. The unit will depart Fort Chilly and convoy 120 miles on limited access highways. The commander has designated rest areas and tactical refueling points along the route. The trip is expected to take 8 hours. Upon arrival at Camp Yukon, the unit will move into the Anatuvak training area and set up a bivouac site, proceeded by their quartering party. During the FTX, the company will conduct tactical-bridging operations on the Yukon River. The FTX will involve normal operations (12 to 16 hours a day), with some night and limited visibility operations. The operations will include the use of pyrotechnics and blank ammunition, but no live fire will be conducted. The area has hills, wetlands, several winding streams, and one large river. The wetlands are identified and marked. The forecasted weather will not adversely affect operations. The soldiers are somewhat familiar with the terrain, which contains some identified and marked-off archeological sites. The training area contains the habitat for two endangered species, which are marked and posted. The unit will conduct unit-maintenance, refueling, messing, shower, and field-sanitation operations within the bivouac site.

Step 1. Identify Hazards

To ensure risk management throughout the operational plan, the unit's executive officer (Lieutenant Young) conducted an operational analysis to break down the exercise into events. This allowed her to manage the risks for the various tasks. She also identified particular tasks for the operation using the company Mission Training Plan (MTP). Figure 1 illustrates the units' prepared operational analysis.

Leaders developed the hazard list using their experience, lessons learned, unit SOPs, applicable

references, and guidance from the chain of command. The unit consulted Fort Chilly's and Camp Yukon's installation and operational staffs to obtain more information on the environmental considerations for the area of operations. They identified applicable environmental standards, laws, and ROE that affected the mission.
Company leaders annotated each task and associated environmental hazards on the risk-management work sheet in Figure 2, page SH-2-4, sections E and F. For the purposes of this practical example, only the high-profile tasks (2, 3, and 4) are detailed in the work sheet.

1. **Conduct preoperational checks.**
2. **Conduct convoy operations to Camp Yukon.**
3. **Establish a bivouac:**
- **Conduct quartering party operations.**
- **Establish a defensive perimeter.**
- **Conduct refueling operations.**
- **Conduct mess operations.**
- **Establish field latrines.**
- **Establish field maintenance operations.**
4. **Plan and direct assault float bridge construction.**
5. **Prepare for redeployment.**
6. **Conduct convoy operations to Ft. Chilly.**
7. **Conduct recovery operations.**
8. **Conduct AAR.**

Figure 1. Operational analysis

STEP 2. ASSESS HAZARDS
Unit leaders assessed each hazard to determine the risk for potential harm to the environment. Their assessment was based upon how often the environmental hazard occurred during the operation (probability) and what effect the hazard had on the environment (severity). They used the probability and severity definitions from FM 20-400, Chapter 4, Figure 4-3 and 4-4. Leaders determined the initial risk of each hazard by applying the risk- assessment matrix in Figure 4-5. The unit commander informed his staff to be sensitive to tactical bridging operations and their effects on the Yukon river and surrounding areas. Each hazard assessment was annotated in section G.

Unit leaders developed controls to eliminate or reduce the probability or severity of each hazard. They identified a mix of educational-, physical-, and avoidance-type controls and annotated them in section). Once all risk-control measures were in place, some risk remained. This residual risk was annotated in section I. Unit leaders informed the chain of command and appropriate commander of the residual risk and its implications for the operation. The commander was

concerned over the environmental hazards associated with the bridging operations and directed his staff to consider additional controls. The staff developed additional controls and presented the revised risk assessment to the commander, thereby further reducing the residual risk. The commander agreed that the new controls were sufficient and decided the residual risk was acceptable.

STEP 4. IMPLEMENT CONTROLS

Leaders identified how each control would be implemented and assigned responsibility to unit personnel. The "how to" for each control was annotated in section J. For example, fueling bridge boats during bridging operations was a major concern for the company. Leaders identified several control measures to include ensuring that operators were properly trained to dispense fuel, appropriate spill equipment was available, and all fueling of boats be completed while the boats were still on the trucks before launch. This step required leaders to anticipate environmental requirements and incorporate them as part long-term, short-term, and near-term planning. The residual risk determination was annotated in section K .

STEP 5. SUPERVISE AND EVALUATE

Leaders and staff continuously monitored controls throughout the operation to ensure their effectiveness and modified controls as required. Leaders made on-the-spot corrections and evaluated individual and collective performances. They held those in charge accountable and ensured that all tasks were performed to applicable standards. Leaders discussed the evaluation of environmental-related hazards, controls, soldier performance, and leader supervision during AARs to ensure the development of environmental lessons learned, for use in future operations.

Summary

The 586th AFB Company leadership properly managed environmental-related risk during their operation by accurately identifying potential environmental hazards, developing controls, making risk decisions, implementing controls, and ensuring proper supervision and evaluation. Due to their effective risk management, the company successfully completed their mission and minimized their company's impact on the environment.

A. Mission or Task:	B. Date/Time Group	C. Date Prepared:
586th Engineer Company (AFB)	Begin: 010600RJunXX End: 061200RJunXX	22 May XX

D. Prepared By: (Rank, Last Name, Duty Position) 1LT Elizabeth Young, XO

E. Task:	F. Identify Hazards:	G. Assess Hazards:	H. Develop Controls:	I. Determine Residual Risk:	J. Implement Controls ("How To"):
Establish a tactical bivouac	Maneuver damage from off-road movement	Moderate (M)	1. Use quartering party to direct vehicles and equipment into the bivouac site 2. Identify and mark all sensitive areas within the bivouac area 3. Avoid using areas with endangered and threatened species 4. Provide maneuver-damage control team	Low (L)	TACSOP, para 11(a), OPORD - XO will lead quartering party, Camp Yukon range control map. (ARTEP 5-145-32, MTP 05-2-0908, FM 71-1, FM 20-400)
	Spills from tactical refueling operations	Moderate (M)	1. Train all fuel handlers on proper refueling procedures 2. Provide spill equipment 3. Ensure that only fuel handlers will dispense fuel 4. Locate refueling sites away from bodies of water and wetland areas	Low (L)	TACSOP, para 11(a), OPORD - support platoon leader will check status of spill equipment, brief all soldiers before the convoy on refueling procedures. (FM 10-71, FM 20-400, ARTEP 5-145-32, MTP 05-2-1024)
	HM spills from vehicle-maintenance operations	Moderate (M)	1. Brief all personnel on proper waste accumulation site and field PMCS procedures	Low (L)	TACSOP, para 12(a), OPORD, TM 38-410, Camp Yukon Environmental and Range Regulations. (FM 43-5)

K. Determine overall mission/task risk level after controls are implemented (circle one):

LOW (L) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)

Figure 2. Sample of completed work sheet for tactical bivouac

A. Mission or Task: 586th Engineer Company (AFB)	B. Date/Time Group Begin: 010600RJunXX End: 061200RJunXX	C. Date Prepared: 22 May XX
D. Prepared By: (Rank, Last Name, Duty Position) 1LT Elizabeth Young, XO		

E. Task:	F. Identify Hazards:	G. Assess Hazards:	H. Develop Controls:	I. Determine Residual Risk:	J. Implement Controls ("How To"):
Establish a tactical bivouac (continued)	HM spills from vehicle-maintenance operations	Moderate (M)	2. Provide spill equipment 3. Provide secondary containment for all drums and containers		(ARTEP 5-145-32, MTP 05-2-1131, ARTEP 5-145-32, MTP 05-2-1005)
	Digging in sensitive and restricted areas	Moderate (M)	1. Dig only in approved area confirmed by range control 2. Identify and mark all sensitive areas and habitats within the AO 3. Site all fighting positions to avoid sensitive areas 4. Fill in all excavations upon departure	Low (L)	TACSOP, para 7(a), OPORD, FM 7-10, Camp Yukon Environmental and Range Regulations. (ARTEP 5-145-32, MTP 05-2-0913)
	Starting range and training area fires	Moderate (M)	1. Inform soldiers that no open fires are allowed 2. Provide fire-prevention equipment at refueling, messing, maintenance, and other specified locations in OPORD 3. Brief soldiers on the proper use of pyrotechnics, smoke pots, and grenades	Low (L)	TACSOP, para 7(a), OPORD, Camp Yukon Environmental and Range Regulations. (FM 3-50, ARTEP 5-145-32, MTP 05-2-0917)

K. Determine overall mission/task risk level after controls are implemented (circle one):

LOW (L) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)

Figure 3. Sample of completed work sheet for tactical bivouac (continued)

A. Mission or Task:	B. Date/Time Group	C. Date Prepared:
586th Engineer Company (AFB)	Begin: 010600RJunXX End: 061200RJunXX	22 May XX

D. Prepared By: (Rank, Last Name, Duty Position)
1LT Elizabeth Young, XO

E. Task:	F. Identify Hazards:	G. Assess Hazards:	H. Develop Controls:	I. Determine Residual Risk:	J. Implement Controls ("How To"):
Establish a tactical bivouac (continued)	Polluting water sources from field latrines and mess operations	Moderate (M)	1. Coordinate for "port-a potty" units from range control 2. Recover all mess-operations waste (grease, trash) 3. Inform soldiers of proper field-sanitation techniques 4. Train field-sanitation teams 5. Establish trash-collection points	Low (L)	TACSOP, para 7(a), OPORD, FM 7-10, Camp Yukon Environmental and Range Regulations. (FM 21-10, FM 10-23, ARTEP 5-145-32, MTP 05-2-1031, ARTEP 5-145-32, MTP 05-2-1009)
	Leaving litter and debris in training area	Moderate (M)	1. Ensure that leader conducts daily inspections of bivouac area 2. Brief soldiers on trash-collection points and procedures 3. Conduct periodic police calls of area 4. Ensure that leader accounts for all equipment, supplies, wire, trash, and wastes before departing an area	Low (L)	TACSOP, para 7(a), OPORD, Camp Yukon Environmental and Range Regulations - First Sergeant will coordinate training-area final inspection with range control.

K. Determine overall mission/task risk level after controls are implemented (circle one):

LOW (L) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)

Figure 4. Sample of completed work sheet for tactical bivouac (continued)

A. Mission or Task: 586th Engineer Company (AFB)	B. Date/Time Group Begin: 010600RJunXX End: 061200RJunXX	C. Date Prepared: 22 May XX
D. Prepared By: (Rank, Last Name, Duty Position) 1LT Elizabeth Young, XO		

E. Task:	F. Identify Hazards:	G. Assess Hazards:	H. Develop Controls:	I. Determine Residual Risk:	J. Implement Controls ("How To"):
Plan and direct assault float-bridge construction	Maneuver damage and erosion to entry and exit banks	High (H)	1. Conduct operations only in approved areas 2. Use recon party to identify and mark all sensitive areas and routes within the AO 3. Use vehicle guides to direct vehicles and equipment into the AO 4. Control vehicle speeds and movements 5. Harden and stabilize entry and exit points to minimize erosion and maximize mobility	Moderate (M)	TACSOP, para 13(a), OPORD, FM 90-13, Camp Yukon Environmental and Range Regulations. (TM 5-5420-209-12, TM 5-1940-277-10, ARTEP 5-145-32, MTP 05-2-0605)
	Spill into river from over-the-water boat refueling and fueling of tactical vehicles near river	High (H)	1. Train all fuel handlers on proper refueling procedures 2. Provide spill equipment 3. Ensure that only fuel handlers will dispense fuel 4. Locate refueling site away from bodies of water and wetland areas 5. Ensure that there will be no over-the-water refueling	Moderate (M)	TACSOP, para 13(a), OPORD, FM 90-13, Camp Yukon Environmental and Range Regulations. (FM 10-71, TM 5-5420-209-12, TM 5-1940-277-10, ARTEP 5-145-32 MTP 05-2-0605)

K. Determine overall mission/task risk level after controls are implemented (circle one):

LOW (L) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)

Figure 5. Sample of completed work sheet for float-bridge construction

A. Mission or Task: 586th Engineer Company (AFB)	B. Date/Time Group Begin: 010600RJunXX End: 061200RJunXX	C. Date Prepared: 22 May XX
D. Prepared By: (Rank, Last Name, Duty Position) 1LT Elizabeth Young, XO		

E. Task:	F. Identify Hazards:	G. Assess Hazards:	H. Develop Controls:	I. Determine Residual Risk:	J. Implement Controls ("How To"):
Plan and direct assault float-bridge construction (continue)	Oil and greasy water bilged from bridge-erection boats into river	High (H)	1. Brief all boat operators concerning proper bilging procedures 2. Provide spill equipment for each boat 3. Steam clean each engine compartment before FTX	Moderate (M)	TACSOP, para 13(a), OPORD, FM 90-13, Camp Yukon Environmental and Range Regulations. (TM 5-5420-209-12)
	Maneuvering in threatened and endangered species habitat and archeological sites	High (H)	1. Conduct operations only in approved areas 2. Use recon party to identify and mark all sensitive areas and routes within the AO 3. Use vehicle guides to direct vehicles and equipment into the AO 4. Control vehicle speeds and movements	Moderate (M)	TACSOP, para 10(a), OPORD, Camp Yukon Range Control Map, Camp Yukon Environmental and Range Regulations. (ARTEP 5-145-32, MTP 05-2-0410, FM 5-36, FM 20-400)

K. Determine overall mission/task risk level after controls are implemented (circle one):

LOW (L) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)

Figure 6. Sample of completed work sheet for float-bridge construction (continued)

A. Mission or Task:	B. Date/Time Group	C. Date Prepared:
586th Engineer Company (AFB)	Begin: 010600RJunXX End: 061200RJunXX	22 May XX

D. Prepared By: (Rank, Last Name, Duty Position)

1LT Elizabeth Young, XO

E. Task:	F. Identify Hazards:	G. Assess Hazards:	H. Develop Controls:	I. Determine Residual Risk:	J. Implement Controls ("How To"):
Plan and direct assault float-bridge construction (continue)	Use of smoke pots and grenades in sensitive habitat areas and civilian population areas	High (H)	1. Brief all leaders on proper use and deployment of smoke pots and grenades 2. Use smoke only in approved areas 3. Coordinate with range control before smoke operations 4. Observe and calculate atmospheric effects on the dispersion and direction of the smoke 5. Stop smoke operations immediately if atmospheric conditions change, or when notified by range control	Moderate (M)	TACSOP, para 13(a), OPORD, Camp Yukon Environmental and Range Regulations. (FM 3-50, ARTEP 5-145-32, MTP 05-2-0917)
	Washing vehicles and equipment in or around water sources	Moderate (M)	1. Inform all leaders to conduct vehicle and equipment cleaning only at approved washracks before departure from Camp Yukon 2. Ensure that leaders will inform and supervise soldiers	Low (L)	TACSOP, para 14(a), OPORD, Camp Yukon Environmental and Range Regulations.

K. Determine overall mission/task risk level after controls are implemented (circle one):

LOW (L) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)

Figure 7. Sample of completed work sheet for float-bridge construction (continued)

STUDENT HANDOUT 4

Points of Contact

The table below provides POC's available at most installations that can assist you with questions you may have in the area of environmental compliance.

Topic	Point of Contact
Air pollution	Environmental and Natural Resources Division (ENRD)
Audits Environmental Compliance Assessment System (ECAS)	ENRD
Archeological and historic sites	ENRD, Range Control (DPTM)
Clean/safe water	ENRD
Environmental Training	Battalion S3, ENRD
HAZCOM training	Battalion S3, Safety Office, Fire Department
Hazardous materials	Bn S4, DOL, Safety Office, Fire Department
Hazardous waste	Bn S4, ENRD, DRMO
Laws and regulations	Bn Adjutant, S1, S3, ENRD, Legal
Noise Pollution	ENRD, Range Control (DPTM)
Range clearance/restrictions	Range Control (DPTM)
Recycling program	Bn S4, ENRD
Standing Operating Procedures	Bn S3 and S4, ENRD
Spill reporting/planning	Bn S3 and S4, ENRD
Threatened/endangered species	ENRD
Water pollution	ENRD, Bn S3 and S4
Wetland protection	ENRD, Range Control (DPTM)
Wildlife management	ENRD, Range Control (DPTM)